

Oracle® Solaris 10 1/13 Release Notes

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Preface

Oracle Solaris 10 1/13 Release Notes contains installation and runtime problem details. Also included are end-of-software support statements for the Oracle Solaris 10 operating system (OS).

For the latest version of this document, search for “Oracle Solaris 10 1/13 Release Notes” on <http://www.oracle.com/technetwork/documentation/index.html>.

Note – This Oracle Solaris release supports systems that use the SPARC and x86 families of processor architectures. The supported systems appear in the *Oracle Solaris OS: Hardware Compatibility Lists*. This document cites any implementation differences between the platform types.

In this document, these x86 related terms mean the following:

- x86 refers to the larger family of 64-bit and 32-bit x86 compatible products.
- x64 relates specifically to 64-bit x86 compatible CPUs.
- "32-bit x86" points out specific 32-bit information about x86 based systems.

For supported systems, see the *Oracle Solaris OS: Hardware Compatibility Lists*.

Note – Oracle's Sun System defects have migrated to Oracle's bug database. As a result, customers with support contracts can now use [My Oracle Support](#) (MOS) to search the bug information by using BugDB bug IDs (previously CRs). For more information, see the *Sun Systems Defects Move to Oracle's Bug Database* (Doc ID 1501467.1) knowledge article that is available on MOS.

The bug IDs mentioned in this document are BugDB IDs.

Who Should Use This Book

These notes are for users and system administrators who install and use the Oracle Solaris 10 OS.

Related Books

You might need to refer to the following documentation when you install the Oracle Solaris 10 OS:

- *Java Desktop System Release 3 Solaris 10 Collection*
- *Oracle Solaris 10 1/13 What's New*
- *Oracle Solaris 10 1/13 Installation Guide: Basic Installations*
- *Oracle Solaris 10 1/13 Installation Guide: Planning for Installation and Upgrade*
- *Oracle Solaris 10 1/13 Installation Guide: Live Upgrade and Upgrade Planning*
- *Oracle Solaris 10 1/13 Installation Guide: Network-Based Installations*
- *Oracle Solaris 10 1/13 Installation Guide: JumpStart Installations*
- *Oracle Solaris 10 System Administrator Collection*
- *Oracle Solaris 10 1/13 Patch List*

For information about current CERT advisories, see the official CERT web site at <http://www.cert.org>.

For some hardware configurations, you might need supplemental hardware-specific instructions for installing the Oracle Solaris software. If your system requires hardware-specific actions at certain points, the manufacturer of your hardware has provided supplemental Oracle Solaris installation documentation.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P-1 Typographic Conventions

| Typeface | Description | Example |
|------------------|---|---|
| AaBbCc123 | The names of commands, files, and directories, and onscreen computer output | Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code> |
| AaBbCc123 | What you type, contrasted with onscreen computer output | <code>machine_name% su</code> <code>Password:</code> |
| <i>aabbcc123</i> | Placeholder: replace with a real name or value | The command to remove a file is <code>rm filename</code> . |
| <i>AaBbCc123</i> | Book titles, new terms, and terms to be emphasized | Read Chapter 6 in the <i>User's Guide</i> . A <i>cache</i> is a copy that is stored locally. Do <i>not</i> save the file. Note: Some emphasized items appear bold online. |

Shell Prompts in Command Examples

The following table shows UNIX system prompts and superuser prompts for shells that are included in the Oracle Solaris OS. In command examples, the shell prompt indicates whether the command should be executed by a regular user or a user with privileges.

TABLE P-2 Shell Prompts

| Shell | Prompt |
|--|----------------------------|
| Bash shell, Korn shell, and Bourne shell | \$ |
| Bash shell, Korn shell, and Bourne shell for superuser | # |
| C shell | <code>machine_name%</code> |
| C shell for superuser | <code>machine_name#</code> |

License Updates

This chapter provides information on updates to licenses.

Oracle Solaris License Updated for Java SE Components

The Oracle Solaris license has been updated to include the following section:

Included Java SE Components

The Programs may include or be distributed with certain separately licensed components that are part of Java Platform, Standard Edition ("Java SE"). Java SE and all components associated with it are licensed to you under the terms of the Oracle Binary Code License Agreement for the Java SE Platform Products, and not under this agreement. A copy of the Oracle Binary Code License Agreement for the Java SE Platform Products can be found at <http://www.oracle.com/technetwork/java/javase/terms/license/index.html>

Installation Issues

This chapter provides information and describes issues related to the installation of the Oracle Solaris 10 1/13 release.

Note – To see previously documented bugs and issues that are fixed and no longer apply to the Oracle Solaris 10 1/13 release, refer to [Appendix A, “Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 1/13 Release.”](#)

General Information

This section provides general information such as behavior changes in the Oracle Solaris 10 1/13 release.

Java Recommendations

Oracle Solaris 10 1/13 ships with Java 6 Update 37, and for compatibility reasons also contains Java 4 and Java 5 releases. For the latest features, security, and performance enhancements, customers are urged to [download the latest Java 7 release](#). The feature enhancements are detailed in the [release notes](#) for each Java 7 update. As an example of a significant enhancement to Java 7 for running on the latest Oracle Solaris systems, [Java 7 Update 4](#) introduced the new OracleUcrypto Provider, which on SPARC T4 platforms directly accesses the underlying native (on-chip) T4 crypto capabilities for maximum performance while minimizing CPU load.

Oracle Premier Support is available for the [Java SE platform](#). Customers not on a support plan and who have not moved to Java 7, are encouraged to review the [Java SE support roadmap](#) for additional information on support for older Java SE releases.

Oracle Configuration Manager

Starting with the Oracle Solaris 10 1/13 release, the Auto Registration feature uses Oracle Configuration Manager (OCM) to collect configuration information of the system and upload it to the Oracle repository. For information on using the OCM, see [Chapter 17, “Working With Oracle Configuration Manager,” in *Oracle Solaris Administration: Basic Administration*](#).

BIOS and Firmware Upgrade

The Oracle Solaris 10 1/13 release is tested on all supported Oracle systems running the latest combinations of the following:

- BIOS and Oracle ILOM
- SPARC firmware, OBP, and Hypervisor

For best results using the Oracle Solaris 10 1/13 release, upgrade your BIOS/firmware to the latest release listed in the matrix at <http://www.oracle.com/technetwork/systems/patches/firmware/release-history-jsp-138416.html>.

Memory Requirements

The following are the minimum and recommended memory requirements for the Oracle Solaris 10 1/13 release.

- For UFS root file systems:
 - Minimum: 1.5 GB
 - Recommended: 1.5 GB or more
- For ZFS root pools:
 - Minimum: 1.5 GB
 - Recommended: 1.5 GB or more for overall ZFS performance

Note – You need at least 16 GB of disk space.

Upgrading to Oracle Solaris 10 1/13

You can upgrade to Oracle Solaris 10 1/13 by using the standard upgrade process or by using Live Upgrade. For more information about Live Upgrade, see [My Oracle Support](#).

To upgrade to the Oracle Solaris 10 1/13 release from a release earlier than the Solaris 8 OS, first upgrade to any of the releases in the following list. Then, upgrade to the Oracle Solaris 10 1/13 release.

SPARC: You can upgrade to Oracle Solaris 10 1/13 on SPARC based systems from the following major releases:

- Solaris 8 OS
- Solaris 9 OS
- Oracle Solaris 10 OS

x86: You can upgrade to Oracle Solaris 10 1/13 on x86 based systems from the following major releases:

- Solaris 9 OS
- Oracle Solaris 10 OS

Support for Products Not Part of the Oracle Solaris OS

The Oracle Solaris 10 1/13 release has been tested for compatibility with previous releases in line with the Oracle Solaris compatibility guarantee. This means that applications, including third-party applications, which adhere to the Oracle Solaris published ABI will work without modification on the Oracle Solaris 10 1/13 release.

Your system might run both an Oracle Solaris OS and other products that are not part of the Oracle Solaris software. These products might be supplied by either Oracle or another company. If you upgrade this system to the Oracle Solaris 10 release, make sure that these other products are also supported on the Oracle Solaris 10 OS. Depending on the status of each of these products, you can choose one of the following options:

- Verify that the existing version of the product is supported on the Oracle Solaris 10 software.
- Install a new version of the product that is supported on the Oracle Solaris 10 release. You might need to remove the previous version of the product prior to upgrading to the Oracle Solaris software. See the product documentation for more details.
- Remove the product prior to upgrading to the Oracle Solaris 10 software.

Before You Begin

This section contains critical installation issues that you need to be aware of before installing or upgrading to the Oracle Solaris 10 OS. These issues might prevent an installation or upgrade from completing successfully. If bugs in this section apply to your system, you might need to perform the recommended workarounds before you install or upgrade.

EMC PowerPath

EMC PowerPath versions up to and including 5.3 P01, must upgrade to PowerPath 5.3 P02 if you are using any of the following:

- Oracle Solaris 8/11 and above
- Kernel patch 144500-19 and above

For more information, see InfoDoc 1358671.1 on [My Oracle Support](#).

Live Upgrade and Oracle Solaris Zones

Starting with the Solaris 10 8/07 release, the use of Live Upgrade with Oracle Solaris Zones is supported. For more information, see InfoDoc 1004881.1 at [My Oracle Support](#).

Live Upgrade Restrictions

For Live Upgrade to operate correctly, a limited set of patch revisions must be installed for a given OS version. Make sure that you have the most recently updated patch list by consulting [My Oracle Support](#). The Oracle Solaris 10 1/13 release has the following Live Upgrade restrictions:

- To upgrade your current Solaris 8 OS to the Oracle Solaris 10 1/13 release using Live Upgrade, note the following information:
 - SPARC: Using Live Upgrade to upgrade from the Solaris 8 release to the Oracle Solaris 10 1/13 release is supported. For step-by-step procedures on how to use Live Upgrade, see [My Oracle Support](#).
 - x86: Using Live Upgrade to upgrade from the Solaris 8 release to the Oracle Solaris 10 1/13 release is not supported. Instead, use the standard upgrade procedure or use Live Upgrade to upgrade from the Solaris 8 OS to the Solaris 9 OS or to the Oracle Solaris 10 OS. You can then use Live Upgrade to upgrade from the Solaris 9 release or the Oracle Solaris 10 release to the Oracle Solaris 10 1/13 release.

Note – The use of Live Upgrade to upgrade from Solaris 8 to the Solaris 10 5/08, Solaris 10 10/08, Solaris 10 5/09, and Solaris 10 10/09 releases is supported. Refer to Infodoc 1019995.1 at [My Oracle Support](#).

- To upgrade your current Solaris 9 OS to the Solaris 10 10/09 release using Live Upgrade, apply the following patches:
 - SPARC: 137477-01 or later
 - x86: 137478-01 or later
- To upgrade your current Oracle Solaris 10 OS to the Oracle Solaris 10 1/13 release by using Oracle Solaris Live Upgrade, apply the following patches:
 - SPARC: 137321-01 or later
 - x86: 137322-01 or later

These patches provide the new p7zip functionality. Live Upgrade requires p7zip functionality in order to support an upgrade to Oracle Solaris 10 1/13.

Note – The minimum required patch information for the live boot environment prior to using Live Upgrade is provided in Infodoc 1004881.1 at [My Oracle Support](#).

Using Live Upgrade With a Zone Root on a ZFS File System

The Oracle Solaris 10 1/13 release provides the ability to install a ZFS root file system and configure a zone root on Oracle Solaris ZFS. Typically, you can create and configure a zone root on ZFS as you wish. If you plan to use Oracle Solaris Live Upgrade with ZFS and zone configurations, review the following information:

- To use Oracle Solaris Live Upgrade with zone configurations that are supported in the Oracle Solaris 10 1/13 release, you must first upgrade your system to the Oracle Solaris 10 1/13 release by using the standard upgrade program.
- Then, with Live Upgrade, you can either migrate your UFS root file system with zone roots to a ZFS root file system or you can upgrade or patch your ZFS root file system and zone roots.
- You cannot migrate unsupported zone configurations from a previous Oracle Solaris 10 release directly to the Oracle Solaris 10 1/13 release.

For a detailed description of supported zone configurations to be upgraded or patched in the Oracle Solaris 10 1/13 release, see “[Migrating to a ZFS Root File System or Updating a ZFS Root File System \(Live Upgrade\)](#)” in *Oracle Solaris ZFS Administration Guide*.

For complete instructions about setting up these configurations, see “[Oracle Solaris Installation and Live Upgrade Requirements for ZFS Support](#)” in *Oracle Solaris ZFS Administration Guide*.

Review the information in this chapter before you begin your migration to a ZFS root file system or before setting up zones on a system with a ZFS root file system. Follow the recommended procedure exactly to set up zones on a system with a ZFS root file system to ensure that you can use Live Upgrade on that system.

Upgrading a Trusted Extensions System That Is Configured With Labeled Zones

Oracle Solaris systems that are configured with the Trusted Extensions feature use non-global zones. The process of upgrading these systems is the same as upgrading an Oracle Solaris system that uses zones and has the same issues.

- **ZFS zones**– Oracle Solaris systems with ZFS zones cannot currently be upgraded. For Trusted Extensions systems with ZFS zones, the alternative is to recreate the zones. Perform these steps:
 1. Back up all the data by using the `tar -T` command.
 2. Delete the zones.
 3. Upgrade the system and reconfigure all the zones.
 4. Restore all the data.
- **NFSv4 domain** – After upgrading your system, when you bring up each labeled zone, you will be prompted for the NFSv4 domain. To avoid this prompt before upgrade, add the correct `NFSMAPID_DOMAIN` value in the `/etc/default/nfs` file in each labeled zone. For more information, see bug 15230132.
- **Name Service** – If your system was configured during installation to use a name service that is different from the name service being used during the upgrade, then the global zone might use the correct name service after boot.

For example, if you specified NIS as the name service to use during a system installation but the system was later converted to be an LDAP client, the `luactivate` boot can revert to using NIS as the name service for the global zone (bug 15403669).

The workaround is to adjust the `name_service.xml` symbolic link in the `/var/svc/profile` directory to point to the correct XML file corresponding to the name service currently in use. For example, if NIS was specified as the name service during installation, then `name_service.xml` will be a symbolic link to `ns_nis.xml`. If the system was subsequently converted to being an LDAP client, and LDAP was the name service in use during Live Upgrade, then run the following command:

```
# ln -fs ns_ldap.xml name_service.xml
```

You must run this command before starting Live Upgrade or before running the `lucreate` command. However, if you did not run this command before `lucreate`, then perform the following steps after running the `luactivate` command:

1. Use `lumount` to mount the new boot environment:

```
# lumount BE-name
```

2. Change to the `/var/svc/profile` directory of the boot environment:

```
# cd /.alt.BE-name/var/svc/profile
```

3. Link the `name_service.xml` link as appropriate. For example:

```
# ln -fs ns_ldap.xml name_service.xml
```

4. Use `luumount` to unmount the boot environment:

```
# luumount BE-name
```

Note – If the system is booted without performing these steps, you will need to manually start the appropriate name service-related Service Management Facility (SMF) client services.

Patching Miniroot on SPARC and x86 Compatible Machines

The procedures for using patchadd with the -C destination specifier to patch a miniroot on SPARC and x86 machines have changed. You must now unpack the miniroot, apply patches, then repack the miniroot.

See the following chapters for the detailed steps:

- Chapter 5, “Installing From the Network With DVD Media (Tasks),” in *Oracle Solaris 10 1/13 Installation Guide: Network-Based Installations*
- Chapter 6, “Installing From the Network With CD Media (Tasks),” in *Oracle Solaris 10 1/13 Installation Guide: Network-Based Installations*
- Chapter 7, “Patching the Miniroot Image (Tasks),” in *Oracle Solaris 10 1/13 Installation Guide: Network-Based Installations*

Oracle Solaris Data Encryption Supplement on Oracle Solaris 10 Releases

Starting with the Solaris 10 8/07 release, the Oracle Solaris Data Encryption Supplement packages are included by default with the Oracle Solaris 10 OS. You no longer need to install and download these packages.

Additional Procedures Required When Installing GNOME Display Manager Patches for the Oracle Solaris 10 1/13 Release

Apply the following patches to resolve problems that were reported in bug 15268400 and bug 15243092:

- SPARC: Patch ID 119366-05
- x86: Patch ID 119367-05

The sections that follow provide further steps that you must perform to completely resolve the reported problems. For more information, read the Special Install Instructions section of the patch README for these patches.

x86: Systems With an elx or pcie1x NIC Fail Network Configuration

Systems with an elx or a pcie1x network interface card (NIC) fail to install. During the configuration of the NIC, the following error message might be displayed:

```
WARNING: elx: transmit or jabber underrun: d0<UNDER, INTR, CPLT>
```

See the [elxl\(7D\)](#) or [pcie1x\(7D\)](#) man page for more information.

Workaround: Install and run the network configuration on systems that do not have elx or pcie1x NICs.

Default Size of /var File System Might Be Inadequate

The default size of the /var file system might be insufficient if the /var file system is located on a separate slice. If so, you must manually specify a larger slice size for the /var file system.

Note – If the /var file system is not on a separate slice or partition, this problem does not occur.

Choose one of the following workarounds for either the installation program GUI or the text installer:

- **Workaround 1:** If you are using the Oracle Solaris installation program GUI, follow these steps.
 1. Begin the installation.
 2. From Select Type of Install, select Custom Install.

The Oracle Solaris installation program displays several screens that enable you to customize the software localizations, products, and disk layout that you want to install.
 3. From Lay Out File Systems, select Modify.

The disk layout screen is displayed.
 4. Type /var in the File System column for a specific slice, then click Apply.

The installation program suggests a default size for the /var file system.
 5. Set the Size column entry for the /var file system to double the disk space size.

For example, if the installation program assigns 40 MB of space, change the Size value to 80.
 6. Complete the installation.
- **Workaround 2:** If you are using the text installer, follow these steps.
 1. Begin the installation.

2. From Select Type of Install, select Custom Install.

Several screens are displayed that enable you to customize the software localizations, products, and disk layout that you want to install.

3. From Lay Out File Systems, select Auto Layout.

The disk layout screen is displayed.

4. Type `/var` in the File System column for a specific slice.

The installation program suggests a default size for the `/var` file system.

5. Press F4_Customize to customize the size of the `/var` file system.

6. Set the Size column entry for the `/var` file system to double the disk space size.

For example, if the installation program assigns 40 MB of disk space, change the Size value to 80.

7. Complete the installation.

- If you are using the JumpStart program, use the `filesystem` profile keyword to set the size of the `/var` file system. The following example sets the size of the `/var` file system on slice 5 to 256 MB.

```
filesystem c0t0d0s5 256 /var
```

x86: Do Not Upgrade Hewlett-Packard Vectra XU Series Systems With BIOS Version GG.06.13

The Oracle Solaris 10 software includes a feature that enables you to install large partitions. The system BIOS must support logical block addressing (LBA). BIOS Version GG.06.13 does not support LBA access. The Oracle Solaris boot programs cannot manage this conflict. This issue can also affect other HP Vectra systems.

If you perform this upgrade, your HP system can no longer boot. Only a blank black screen with a flashing underscore cursor is displayed.

Workaround: Do not upgrade HP Vectra XU Series systems with the latest BIOS Version GG.06.13 to this Oracle Solaris 10 release. This version no longer supports these systems.

You can still boot your system by using the boot diskette or boot CD because the boot paths do not use the hard disk code. Then, select the hard disk instead of the network or CD-ROM drive as your bootable device.

SPARC: Older Firmware Might Need Boot Flash PROM Upgrade

On SPARC based systems, the Oracle Solaris 10 OS runs in 64-bit mode only. Some Sun4U systems might need to be upgraded to a higher level of OpenBoot firmware in the flash PROM to run the OS in 64-bit mode. The following systems from Oracle might require a flash PROM update:

- Ultra 2
- Ultra 450 and Sun Enterprise 450
- Sun Enterprise 3000, 4000, 5000, and 6000 systems

The following table lists the UltraSPARC systems and the minimum firmware versions that are required to run the 64-bit Oracle Solaris 10 OS. *System type* is the equivalent of the output of the `uname -i` command. You can determine which firmware version you are running by using the `prtconf -V` command.

TABLE 2-1 Minimum Firmware Versions Required to Run 64-bit Oracle Solaris Software on UltraSPARC Systems

| System Type From <code>uname -i</code> | Minimum Firmware Version From <code>prtconf -V</code> |
|--|---|
| SUNW,Ultra-2 | 3.11.2 |
| SUNW,Ultra-4 | 3.7.107 |
| SUNW,Ultra-Enterprise | 3.2.16 |

Systems not listed in the table do not need a flash PROM update. For instructions on how to perform a flash PROM update, see any edition of the Solaris 8 Sun Hardware Platform Guide at <http://download.oracle.com/docs/cd/E19455-01/>.

Note – Upgrading firmware on both SPARC and x86 based systems can lead to significant performance improvements. To apply a firmware update, follow the instructions in the README file of the corresponding firmware. See also patch-related information at [My Oracle Support](#).

Solaris Management Console 2.1 Software Is Incompatible With Solaris Management Console 1.0, 1.0.1, and 1.0.2 Software

The Solaris Management Console 2.1 software is not compatible with Solaris Management Console 1.0, 1.0.1, or 1.0.2 software. If you are upgrading to the Oracle Solaris 10 release and you have Solaris Management Console 1.0, 1.0.1, or 1.0.2 software installed, you must first

uninstall the Solaris Management Console software before you upgrade. The Solaris Management Console software might exist on your system if you previously installed the SEAS 2.0 overbox, the SEAS 3.0 overbox, or the Solaris 8 Admin Pack.

Choose one of the following workarounds:

- **Workaround 1:** Before you upgrade, use the `/usr/bin/prodreg` command to perform a full uninstall of the Solaris Management Console software.
- **Workaround 2:** If you did not uninstall the Solaris Management Console 1.0, 1.0.1, or 1.0.2 software before you upgraded to the Oracle Solaris 10 release, you must first remove all Solaris Management Console 1.0, 1.0.1, or 1.0.2 packages. Use the `pkgrm` command for package removal instead of the `prodreg` command. Carefully follow the order of package removal provided in Step 3 of the following steps:

1. Become superuser.
2. Type the following command:

```
# pkginfo | grep "Solaris Management Console"
```

If the package description does not start with “Solaris Management Console 2.1,” the package names in the output identify a Solaris Management Console 1.0 package.

3. Use the `pkgrm` command to remove all instances of Solaris Management Console 1.0 packages in the order provided below.

Note – Do not remove any package that has “Solaris Management Console 2.1” in its description. For example, `SUNWmc .2` might indicate Solaris Management Console 2.1 software.

If the `pkginfo` output displays multiple versions of Solaris Management Console 1.0 packages, use the `pkgrm` command to remove both packages. Remove the original package. Then, remove the package that has been appended with a number. For example, if the `SUNWmcman` and `SUNWmcman .2` packages appear in the `pkginfo` output, first remove the `SUNWmcman` package and then remove the `SUNWmcman .2` package. Do not use the `prodreg` command.

```
# pkgrm SUNWmcman
# pkgrm SUNWmcapp
# pkgrm SUNWmcsvr
# pkgrm SUNWmcsvu
# pkgrm SUNWmc
# pkgrm SUNWmcc
# pkgrm SUNWmcsws
```

4. In a terminal window, type the following command:

```
# rm -rf /var/sadm/pkg/SUNWmcapp
```

The Solaris Management Console 2.1 software should now function properly. For future maintenance, or if the Solaris Management Console 2.1 software does not function properly, remove the Solaris Management Console 2.1 software. Reinstall the software by completing the following steps:

1. Use the `pkgrm` command to remove all Oracle Solaris Management Console 2.1 packages and dependent packages in the order provided below.

Note – If your installation has multiple instances of Solaris Management Console 2.1 packages, such as `SUNWmc` and `SUNWmc.2`, first remove `SUNWmc`, and then `SUNWmc.2`. Do not use the `prodreg` command.

```
# pkgrm SUNWpmgr
# pkgrm SUNWrmui
# pkgrm SUNWlvmg
# pkgrm SUNWlvma
# pkgrm SUNWlvmr
# pkgrm SUNWdc1nt
# pkgrm SUNWmg
# pkgrm SUNWmgapp
# pkgrm SUNWmcdev
# pkgrm SUNWmcex
# pkgrm SUNWwbmc
# pkgrm SUNWmc
# pkgrm SUNWmcc
# pkgrm SUNWmccom
```

2. Insert the Solaris 10 Software - 4 CD into your CD-ROM drive.
3. Type the following commands in a terminal window:

```
# cd /cdrom/cdrom0/Solaris_10/Product
# pkgadd -d . SUNWmccom SUNWmcc SUNWmc SUNWwbmc SUNWmcex SUNWmcdev \
  SUNWmgapp SUNWmg SUNWdc1nt SUNWlvmr SUNWlvma SUNWlvmg SUNWpmgr \
  SUNWrmui
```

All previous Solaris Management Console versions are removed. The newly installed Solaris Management Console 2.1 software is now functional.

Cannot Create an Oracle Solaris Flash Archive When a Non-Global Zone Is Installed (15256870)

Starting with the current Oracle Solaris release, an Oracle Solaris flash archive cannot be properly created on a system when a non-global zone is already installed. The Oracle Solaris flash feature is currently incompatible with Oracle Solaris Zones (also known as Oracle Solaris Containers).

Do not use the `flar create` command to create an Oracle Solaris flash archive in these instances:

- In any non-global zone

- In the global zone if any non-global zones are installed on the system

If you create an Oracle Solaris flash archive in either instance, the resulting archive might not install properly when the archive is deployed.

Workaround: You might be able to create an Oracle Solaris flash archive of a system that has installed zones if they are all halted.

x86: Sun Java Workstation 2100Z Might Panic When Booting From Oracle Solaris 10 DVD (15243131)

The DVD combo-drive firmware in a Sun Java Workstation 2100Z from Oracle might cause a system panic. The panic occurs when you boot the workstation from the Oracle Solaris 10 Operating System DVD. After the kernel banner is displayed, the following message is very quickly flashed:

```
panic[cpu0]/thread=fec1be20: mod_hold_stub:
Couldn't load stub module sched/TS_DTBL
fec25cb0 genunix:mod_hold_stub+139 (fec04088, 63, fea11)
fec25cc4 unix:stubs_common_code+9 (1, 8, fec026e4)
fec25ce4 unix:disp_add+3d (fec026dc)
fec25d00 genunix:mod_installsched+a4 (fef01530, fef01518)
fec25d20 genunix:mod_install+2f (fef01518, fec25d3c, )
fec25d2c TS:_init+d (0, d6d89c88, fec25d)
fec25d3c genunix:modinstall+d9 (d6d89c88)
fec25d50 genunix:mod_hold_installed_mod+2e (d6d77640, 1, fec25d)
fec25d7c genunix:modload+ac (fec026c4, fec26c4)
fec25d98 genunix:scheduler_load+3d (fec026c4, fec026dc)
fec25db4 genunix:getcid+50 (fec026c4, fec28514)
fec25dcc unix:dispinit+df (fec25ddc, fe814ba9)
fec25dd4 unix:startup_modules+d5 (fec25dec, fe8cac37)
fec25ddc unix:startup+19 (fe800000, 166130, 7)
fec25dec genunix:main+16 ()
```

Then, the system automatically resets.

Choose one of the following workarounds.

Workaround 1: Modify some BIOS configuration settings. This temporary workaround enables an Oracle Solaris 10 installation to be completed. However, this workaround might cause poor read-DVD performance. Follow these steps:

1. During system boot, press F2 at the prompt.

The screen displays attachment-type options similar to the following:

```
Primary Master [ ]
Primary Slave [ ]
Secondary Master [CD-ROM]
Secondary Slave [ ]
```

2. Choose the DVD drive's attachment type by selecting the CD-ROM attachment type.

Note – The screen might display more than one attachment type, for example, if your system has multiple optical drives. In such cases, you might need to open the system case to determine the DVD drive's point of attachment. Make sure that you select the correct attachment type that applies to the DVD drive.

3. After selecting the correct CD-ROM attachment type, press Enter.
The next screen appears with Type : [Auto] automatically selected.
4. Press the spacebar twice to change the selection to Type : [CD-ROM].
5. Use the arrow keys to select Transfer Mode.
6. Press Enter to display a list of other Transfer Mode options.
7. Use the arrow keys to select Standard, then press Enter to accept your selection.
8. Press F10 to save the configuration changes and exit the BIOS setup.

The system restarts.

Workaround 2: Update the DVD combo drive's firmware to version R1.12. This workaround requires your DVD combo drive to be attached to a system that is running Microsoft Windows. Follow these steps:

1. Remove your DVD combo drive from the Sun Java Workstation 2100Z.
See the workstation's user guide for steps to remove the drive properly.
2. Connect the drive to a system that is running Microsoft Windows and change the drive's master and slave jumper settings, if needed.
3. Go to AOpen's Download Center at <http://download.aopen.com.tw/default.aspx>.
4. Search for your DVD drive's firmware by using the following information:
 - Product: Combo drives
 - Model: COM5232/AAH
 - Categories: Firmware
5. Download and install the firmware version R1.12.
6. Reinstall the drive on the workstation. If needed, restore the original master and slave jumper settings.

Note – Newer versions of the firmware might already be available at Aopen's Download Center. Tests confirm that version R1.12 resolves the panic issue. It cannot be confirmed whether subsequent firmware revisions also resolve the problem.

Installation Bugs

The following bugs might occur during or after the installation of the Oracle Solaris 10 OS.

ZFS Warning Is Displayed During Installation (15783233)

When you perform a network based installation of Oracle Solaris 10 1/13, the following warning message is displayed:

```
WARNING: /usr/sbin/zfs mount -a failed: one or more file systems failed to mount
```

Ignore this warning message.

Installation of Oracle Database 11 for RAC Fails (16038016)

Installation of Oracle database 11 for RAC (Real Application Cluster) fails if the BIND version is 9.6-ESV-R8 or higher. The installation fails because the Oracle database installer uses the nslookup utility for determining the DNS response time for an unreachable node. The nslookup utility fails and the installation is terminated.

Workaround: Run the installer with the `-force` and the `-ignorePrereq` options. For example:

```
# ./runInstaller -silent -reponseFile /tmp/gird.rsp -force -ignorePrereq
```

For information on the workaround see bug 15912313.

Limitations With Installation of ZFS Flash Archives on an Alternate Boot Environment Using Oracle Solaris Live Upgrade (15722517)

Starting with the Oracle Solaris 10 8/11 release, you can use the `luupgrade` command to install a ZFS flash archive to an alternate boot environment. You can also get this feature on a system running Oracle Solaris 10 9/10 by applying the relevant patches listed for bug 15580098. However, installing a ZFS flash archive has the following limitations:

- The master system on which the flash archive is created and the clone system on which the flash archive will be installed should be at the same kernel patch level. Otherwise, the flash archive installation might fail because of errors from `zfs receive`. For example, if a ZFS flash archive is created on a system that runs Oracle Solaris 10 8/11, ensure that the clone system is also at the Oracle Solaris 10 8/11 kernel patch level.

- On systems that run on the Oracle Solaris 9/10 release, the flash archive installation will fail if the master system on which the flash archive is created has descendant datasets under the root dataset. For example, if the master system has a separate /var dataset, the ZFS flash archive created from the master system fails to install to an alternate boot environment on a system where the current boot environment is Oracle Solaris 10 9/10. However, this limitation does not apply to systems that run on the Oracle Solaris 10 8/11 release.

Note – Starting with the Oracle Solaris 10 9/10 release, ZFS flash archive installation to alternate boot environment is supported.

Upgrade Issues and Bugs

Note – For the latest information about upgrade support, see “[Upgrading to Oracle Solaris 10 1/13](#)” on page 18.

This section describes upgrade bugs. Some bugs might occur while you are upgrading to the Oracle Solaris 10 OS. Other bugs might occur after you have completed the upgrade.

Cannot Connect to the X11 Window Server (16226141)

After installing or upgrading to Oracle Solaris 10 1/13 release, you cannot start the following X Window graphical applications:

- Oracle EPM System Configurator
- Fusion Middleware Configuration Wizard

These applications can be used in a nongraphical console mode. If you want to run the applications in graphical mode or find other issues, contact Oracle support.

UltraSPARC T2 Systems Hang During Reboot

After upgrading to the Oracle Solaris 10 1/13 release, UltraSPARC T2 processor systems that run with Openboot (OBP) version older than version 4.29.1 might hang during reboot.

Workaround: Upgrade the system with the latest firmware version.

For more information, see InfoDoc 1501499.1 on [My Oracle Support](#).

Pre-Allocated ZFS volumes Cannot be Resized (15789119)

After installing or upgrading the Oracle Solaris OS, you cannot resize the existing swap and dump volumes. If you try to resize the volumes, an error message similar to the following will appear:

```
/response of "zfs set" command (on terminal): e.g. "cannot set property  
for 'rpool/swap': volume is busy"/  
/in /var/adm/messages and dmesg: e.g. "rpool/swap is a swap or a dump  
device."/
```

You can use any one of the following workarounds:

- **Workaround 1:** Replace the existing swap or dump volume with a new one by using the swap -d and swap -a or the dumpadm -d commands.
- **Workaround 2:** Add another swap volume by using the swap -a command.

Upgrade Fails on Systems With Zones That Have Been Installed But Not Booted

A non-global zone that has been installed but never booted or made ready prevents a system from being upgraded correctly. No error message is displayed.

Workaround: If such a zone is found, the zone should be made ready and then halted prior to starting the upgrade. For example:

```
global# zoneadm -z myzone ready ; zoneadm -z myzone halt
```

Additional Related Locales Might Be Installed

When you select a locale for your installation, additional related locales might also be installed. This change in behavior occurs in the Oracle Solaris 10 release because all full locales, with message translations, and the Asian and Japanese partial locales, locale enabler, have been repackaged based on language support for locales. Other partial locales are still packaged and installed based on geographic region, such as Central Europe.

Oracle Solaris Runtime Issues

This chapter describes Oracle Solaris runtime issues that are known problems.

Note – To see previously documented bugs and issues that are fixed and no longer apply to the Oracle Solaris 10 1/13 release, refer to [Appendix A, “Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 1/13 Release.”](#)

General Information

This section provides general information and recommendations while running the Oracle Solaris 10 1/13 OS.

Recommended Adoption of SHA-256 and SHA-512 crypt Plug-ins for Password Encryption

An additional pair of `crypt(3C)` plug-ins, based on the SHA-256 and SHA-512 digest algorithms, has been available in the Oracle Solaris 10 OS since the Oracle Solaris 10 10/08 release. These plug-ins provide a `crypt(3C)` hash that uses FIPS 140-2 approved algorithms and discontinues using MD5-based hashes.

Adopt the SHA-256 or SHA-512 password hashing algorithms whenever all your systems in the LDAP domain are running at least the Oracle Solaris 10 10/08 release. These algorithms should not be used in an LDAP domain if your systems are running Oracle Solaris releases prior to the Oracle Solaris 10 10/08 release.

For information about how to change the password algorithm, see “[Changing the Password Algorithm \(Task Map\)](#)” in *System Administration Guide: Security Services*.

File System Issues and Bugs

The following file system issues and bugs apply to this Oracle Solaris 10 release.

System Might Encounter Data Integrity Issues (15825389)

If the system is not shutdown properly, data integrity issues might be encountered. For more information, see InfoDoc 1502451.1 on [My Oracle Support](#).

Workaround: For information about the workaround, see InfoDoc 1502446.1 on [My Oracle Support](#).

System Reboots Continuously Because of a ZFS-Related Panic (15809921)

If your system reboots continuously because of a ZFS storage pool with corrupted space map entries, send a system crash dump to Oracle support for root cause analysis.

The initial or subsequent panic strings begin as follows:

```
zfs: freeing free segment
zfs: allocating allocated segment
```

Any attempt to import and mount the problem pool causes the system to panic.

Workaround: Identify the problem pool and import the pool in read-only mode.

1. Stop the system and boot the system with the `milestone=none` option.

For SPARC, type the following command:

```
ok boot -m milestone=none
```

For x86, add the `milestone` option to the appropriate GRUB entry:

```
-m milestone=none
```

2. Immediately, rename the `zpool.cache` file to prevent the system from importing non-root pools.

```
# mv /etc/zfs/zpool.cache /etc/zfs/zpool.hold
```

Do not use any ZFS commands that cause the pool information to be loaded.

3. Reboot the system.

```
# reboot
```

4. Import each pool one at a time to determine the problem pool.
5. Import the problem pool in read-only mode.

```
# zpool import -o readonly=on poolname
```

For information, see InfoDoc 1497293.1 on [My Oracle Support](#).

ZFS and UNIX/POSIX Compliance Issues

ZFS is designed to be a POSIX compliant file system and, in most situations, ZFS is POSIX compliant. However, ZFS does not meet the POSIX compliance tests under the following conditions:

- Updating ZFS files system capacity statistics.
- Modifying existing data with a 100 percent full file system.

Related bugs:

- 15302508
- 15302444
- 15302241

fdisk -E Command Can Sweep Disk Used by ZFS Without Warning (15325067)

If you use the `fdisk -E` command to modify a disk that is used by a ZFS storage pool, the pool becomes unusable and might cause an I/O failure or system panic.

Workaround: Do not use the `fdisk` command to modify a disk that is used by a ZFS storage pool. If you need to access a disk that is used by a ZFS storage pool, use the `format` utility. In general, disks that are in use by file systems should not be modified.

BrightStor ARCserve Backup Client Agent for UNIX (Solaris) and ZFS Support Issue

The BrightStor ARCserve Backup (BAB) Client Agent for UNIX (Solaris) can be used to back up and restore ZFS files.

However, ZFS NFSv4-style ACLs are not preserved during backup. Traditional UNIX file permissions and attributes are preserved.

Workaround: To preserve ZFS files with NFSv4-style ACLs, use the `tar` command with the `-p` option or the `cpio` command with the `-P` option to write the ZFS files to a file. Then, use BAB to back up the `tar` or `cpio` archive.

ZFS GUI Should Check for /usr/lib/embedded_su Patch at the Beginning of Each Wizard (15287937)

If you add the SUNWzfs package from a Solaris 10 10/09 release to a system that runs a release prior to the Solaris 10 6/06 release that does not have the `embedded_su` patch, the ZFS Administration application wizards are not fully functional.

If you attempt to run the ZFS Administration application on a system without the `embedded_su` patch, you will only be able to browse your ZFS configuration. The following error message is displayed:

```
/usr/lib/embedded_su: not found
```

Workaround: Add the `embedded_su` patch (119574-02) to the system that runs a release prior to the Solaris 10 6/06 release.

Upgrading From Some Oracle Solaris 10 Releases Requires Remounting of File Systems

For all Oracle Solaris 10 releases, after you upgrade an NFSv4 server, your programs might encounter EACCES errors. Furthermore, directories might erroneously appear to be empty.

To prevent these errors, unmount and then remount the client file systems. If the unmounting fails, you might need to forcibly unmount the file system by using the `umount -f` command. Alternatively, you can reboot the client.

NFSv4 Access Control List Functions Might Work Incorrectly

NFSv4 access control list (ACL) functions might work incorrectly if clients and servers in the network are installed with different Oracle Solaris 10 releases. The affected ACL functions and command-line utilities that use these functions are the following:

- `acl()`
- `facl()`
- `getfacl`
- `setfacl`

For more information about these functions and utilities, see their respective man pages.

For example, errors might be observed in a network that includes the following configuration:

- A client that is running Oracle Solaris 10 Beta software

- A server that is running Oracle Solaris 10 software

The following table illustrates the results of the ACL functions in client-server configurations with different Oracle Solaris 10 releases.

| Operation | Client Oracle Solaris 10 OS | Server Oracle Solaris 10 OS | Result |
|-----------|-----------------------------|-----------------------------|------------------|
| get ACL | Oracle Solaris 10 Beta | Oracle Solaris 10 OS | Fabricated ACL * |
| get ACL | Oracle Solaris 10 OS | Oracle Solaris 10 Beta | Works correctly |
| set ACL | Oracle Solaris 10 Beta | Oracle Solaris 10 OS | Works correctly |
| set ACL | Oracle Solaris 10 OS | Oracle Solaris 10 Beta | Error: EOPNOTSUP |

Workaround: For the NFSv4 ACL functionality to work properly, perform a full installation of the Oracle Solaris 10 OS on both the server and the client.

Hardware-Related Issues and Bugs

The following hardware-related issues and bugs apply to this Oracle Solaris 10 release.

SPARC: Dynamic Reconfiguration Operations Fail on an OPL Platform (15725179)

Dynamic reconfiguration (DR) operations might fail on an OPL platform when a memory board is being removed from a domain.

You might see error messages similar to the ones shown in the following example:

```
unconfigure SB3: Device busy: dr@0:SB3::pci6
XSB#01-3 could not be unconfigured from DomainID 2 due to operating system error.
```

Workaround: Execute the DR operations after disabling the `fmd` service. For example:

1. Disable the `fmd` service.

```
# svcadm disable fmd
```

2. Perform the DR operations.

3. Enable the `fmd` service.

```
# svcadm enable fmd
```

x64: PCI Subsystem ID Changes in ConnectX Firmware 2.6.0 From Mellanox (15544691)

Upgrading the ConnectX firmware to version 2.6.0 or higher on a running system might cause problems in some HCAs and x64 platforms. This issue affects only Mellanox-branded HCAs. Sun-branded PCIe HCAs, EMs, and NEMs, and SPARC platforms are not affected.

You might be unable to boot the system or the system might hang during boot. The `ibd` (IPoIB) instance numbers might change and prevent the system from booting and plumbing `ibd` devices.

Choose one of the following workarounds.

Workaround 1: Before rebooting the system after updating the firmware using `cxflash`, remove the `ibdx` instances from the `/etc/path_to_inst` file and the `/dev` directory. Perform the following steps:

1. Log in as the root user and list the relevant devices.

The device tree information might look like the following example:

```
# ls -R /devices | grep 15b3
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@1,ffff,ipib
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@1,ffff,ipib:ibd0
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@2,ffff,ipib
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@2,ffff,ipib:ibd1
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0:devctl
```

Note – Device specifics vary depending on the Mellanox-branded card installed.

2. Edit the `path_to_inst` file.
 - a. Make a backup copy of the existing `path_to_inst` file.

```
# cp /etc/path_to_inst /etc/path_to_inst.backup
```
 - b. In the `path_to_inst` file, search for lines that contain `ibd` and `hermon`, and delete those lines. Save and close the file.
3. Remove the entries in the `/dev` directory.

```
# rm /dev/ibd?*
```
4. Reboot the system.

The system boots normally, and the corresponding device tree looks like this:

```
# ls -R /devices | grep 15b3
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@1,ffff,ipib
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@1,ffff,ipib:ibd0
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@2,ffff,ipib
```

```
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@2,ffff,ipib:ibd1
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0:devctl
```

Workaround 2: If you reboot the system before updating the `path_to_inst` file and the `/dev` directory, the system might hang. In such a case, perform the following steps:

1. Power off the system and remove the HCA from the bus.
2. Reboot the system without the HCA installed.
3. Once the system is back on, follow steps 2 and 3 in Workaround 1.
4. Power off the system.
5. Reinstall the HCA.
6. Reboot the system.

If the system reboots but the `ibd` interfaces do not automatically plumb, you might have to manually rename the `/etc/hostname.ib<?>` files to reflect the current device configuration.

The ZFS ARC Allocates Memory Inside the Kernel Cage Preventing DR (15377173)

ZFS can potentially allocate kernel memory across all system boards on systems with very large memory configurations. One free system board is required for dynamic memory reconfiguration so that the memory from the board to be dynamically reconfigured can be copied to the free board. The dynamic memory reconfiguration means that you cannot dynamically reconfigure memory on systems with very large memory configurations that have ZFS running. High-end Sun Fire servers from Oracle can relocate kernel pages so that this issue is avoided. These servers must have kernel page relocation (KPR) enabled for domains with more than 32 cores. No error message is displayed

Workaround: Reduce the amount of kernel memory that ZFS can allocate by setting the `zfs_arc_max` parameter in the `/etc/system` file. The following example sets the maximum size to 512 Mbytes.

```
set zfs:zfs_arc_max = 0x20000000
```

Certain USB 2.0 Controllers Are Disabled

Support for certain USB 2.0 controllers has been disabled because of incompatibilities between these devices and the EHCI driver. The following message is displayed:

```
Due to recently discovered incompatibilities with this
USB controller, USB2.x transfer support has been disabled.
This device will continue to function as a USB1.x controller.
If you are interested in enabling USB2.x support please refer
```

to the ehci(7D) man page.
Please refer to www.sun.com/io for Solaris Ready products and to www.sun.com/bigadmin/hcl for additional compatible USB products.

For the latest information about USB devices, see <http://www.oracle.com/technetwork/server-storage/solaris/overview/usb-faq-140616.html>.

Supported USB Devices and Corresponding Hub Configurations

This Oracle Solaris 10 release supports both USB 1.1 and USB 2.0 devices. The following table is a summary of USB devices that work in specific configurations. Connection types can either be direct to the computer or through a USB hub. Note that USB 1.1 devices and hubs are low speed or full speed. USB 2.0 devices and hubs are high speed. For details about ports and speeds of operation, see the *System Administration Guide: Devices and File Systems*.

TABLE 3-1 USB Devices and Configurations

| USB Devices | Connection Types |
|------------------------------|----------------------------------|
| USB 2.0 storage devices | Direct, USB 1.1 hub, USB 2.0 hub |
| USB 2.0 audio devices | Not supported |
| USB 1.1 devices except audio | Direct, USB 1.1 hub, USB 2.0 hub |
| USB 1.1 audio devices | Direct, USB 1.1 hub |

x86: Limitations Exist With Certain Device Drivers in the Oracle Solaris 10 OS

This release of Oracle Solaris 10 for x86 platforms has the following limitations related to certain drivers and interfaces:

- **Checkpoint resume** – This functionality is turned off for all device types. In the `DDI_SUSPEND` code in your `detach()` function, you should return `DDI_FAILURE`.
- **Power management** – This functionality is unavailable to USB devices. Do not create power management components. Write your driver so that `pm_raise_power()` and `pm_lower_power()` are called only when power management components are created.

DVD-ROM/CD-ROM Drives on Headless Systems

Power management of interactive devices such as removable media is linked with power management of your monitor and the graphics card that drives your monitor. If your screen is active, devices such as the CD-ROM drive and diskette drive remain in full-power mode. These devices might switch to low-power mode on a system without a monitor. To restore power to the CD or diskette drive, use the `volcheck` command to obtain the latest status from each removable device.

Alternatively, you can disable power management on your system by using the `Dtpower` GUI. By disabling power management, these devices remain in full power mode.

x86: Manual Configuration Required to Specify Non-U.S. English Keyboards

By default, the `kdmcfg` program specifies Generic US-English (104-Key) as the keyboard type that is connected to the system. If the system's keyboard is not a US-English keyboard, you must manually specify the keyboard type during installation. Otherwise, the installation will use the default keyboard specification, which is inconsistent with the system's actual keyboard type.

Choose one of the following workarounds.

Workaround 1: If the system's keyboard is not a US-English keyboard, perform the following steps during installation:

1. When the Proposed Window System Configuration For Installation screen is displayed, press Esc.

Note – The information on the Proposed Window System Configuration For Installation screen, which includes the keyboard type, is displayed only for 30 seconds. If you want to change configuration settings, you must press Esc before the 30 seconds lapse. Otherwise, the installation continues by using the displayed settings.

2. Change the keyboard type to the type that corresponds to your system's keyboard.
3. Press Enter to accept the changes and continue with the installation.

Workaround 2: To change the keyboard type on a system that is already running the Oracle Solaris 10 OS, use the `kdmcfg` program. Choose the option that applies to the type of X server your system is running.

- If your system is running the Xsun server, follow these steps:
 1. Run `kdmcfg`.
 2. Use the Change Keyboard option to change the keyboard type.

3. Save the configuration.
- If your system is running the default Xorg server, follow these steps:
 1. Run `xdmconfig`.
 2. Select the Xsun server.
 3. Use the Change Keyboard option to change the keyboard type.
 4. Save the configuration.
 5. Run `xdmconfig` again to switch to the Xorg server.

Compiler Related Issues

This section describes compiler related issues that apply to Oracle Solaris 10 OS.

Programs Compiled With Some Options of Oracle Solaris Studio Do Not Run (16237300)

An executable file that is generated by Oracle Solaris Studio 12.3, 1/13 Platform Specific Enhancement, on Fujitsu M10 systems running Oracle Solaris 10 1/13 does not run if the source file is compiled with any of the following options:

- `-fast`
- `-xtarget=native`
- `-xtarget=native64`
- `-xtarget=sparc64x`
- `-xarch=native`
- `-xarch=sparcace`

The program does not run and an error message similar to the following is displayed:

```
ld.so.1: a.out: fatal: a.out: hardware capability (CA_SUNW_HW_1)
unsupported:
0x1000  [ RANDOM ]
Killed
```

Note – This issue occurs if you are using Oracle Solaris Studio 12.3 1/13 on a Fujitsu M10 system that runs the Oracle Solaris 10 1/13 release.

Workaround: Compile the program by using any of the following options:

- `-fast -xtarget=sparc64vii`
- `-xtarget=sparc64vii`
- `-xarch=sparcima`

Localization Issues

This section describes localization issues that apply to Oracle Solaris 10 OS.

Firefox and Thunderbird Hang in the Hangul Input Method (16043053)

Firefox 10.0.7 and Thunderbird 10.0.7 hang when you use the Hangul input method in the ko_KR.EUC locale. This error occurs because the Internet Intranet Input Method (IIIM) gtk-im-module module is not configured properly in the private libraries of GNOME and GTK that are bundled with Firefox and Thunderbird.

Choose one of the following workarounds:

Workaround 1: Use the Kole input method instead of the Hangul input method. You can select the Kole input method in the input method selector panel that is located in the GNOME notification area.

Workaround 2: Reconfigure the gtk-im-module module in the private libraries of GNOME and GTK. To reconfigure the module, perform the following steps:

```
# ln -s /usr/lib/gtk-2.0/2.4.0/immodules/im-iiim.so  
/usr/lib/gnome-private/lib/gtk-2.0/2.10.0/immodules/im-iiim.so  
  
# /usr/lib/gnome-private/bin/gtk-query-immodules-2.0 >  
/usr/lib/gnome-private/etc/gtk-2.0/gtk.immodules
```

Swedish Software Translations Note

Swedish software translations are no longer updated since the Solaris 10 8/07 release except for translations provided by communities. Therefore, updated messages are displayed in English.

Workaround: None.

Multiple Input Method Switcher Applications Appear in Trusted Java Desktop System

When you log in to the Trusted Java Desktop System with UTF-8 or Asian locales, the Input Method Switcher application, `iiim-panel`, appears per label by default. Therefore, in a multiple-label environment, multiple `iiim-panel`s appear, which could be confusing to the user.

No error message is displayed.

Workaround: Stop using the `iiim-panel`. Perform the following steps:

1. Right-click the `iiim-panel` and select Preference.

The Input Method Preference Editor, `iiim-properties`, is displayed.

2. Select None or Attach to Each Application from the Input Method Status and Switcher Placement list in the General tab.
3. Click the Apply or OK button.

To switch the input language, you can also use Hotkey. To enable Hotkey, perform the following steps:

1. Go to the Misc tab in the `iiim-properties` editor.
2. Select the Enable Language/Script Choice window using the Hotkey option.
3. Click the Apply or OK button.

Note – Once Attach to Each Application is selected, the language switcher list will not be displayed for GTK applications. You can switch the input language by using Hotkey.

Wnn8 Japanese Input Method

The Wnn8 Japanese Input method cannot be used if the Wnn8 servers are not enabled.

Workaround: Enable the Wnn8 servers.

```
# svcadm enable wnn8/server
```

In addition, select Wnn8 as the Japanese Language engine by running the `iiim-properties` command.

x86: Arabic Text Not Appearing in ar Locales

If your x86 system is using Xorg as the default X server, the Arabic font (iso7759-6) does not appear in the `ar` locale. This error does not occur if you are using Xsun instead of Xorg.

Workaround: Follow these steps.

1. As a superuser, edit the `/usr/dt/config/Xservers` file.

- Uncomment or add the following line:

```
:0 Local local_uid@console root /usr/openwin/bin/Xsun :0
-nobanner -defdepth 24
```

- Comment out the following line:

```
:0 Local local_uid@console root /usr/X11/bin/Xorg :0
```

2. Reboot the system.

Alternatively, you can log in to `ar_EG.UTF-8` or other UTF-8 locales.

Migration Note for UTF-8 Locales

When migrating to UTF-8 locales, the files affect the method that you use to import or export data.

Emails Saved as Portable Format

Modern email messages are tagged with the MIME charset tag. The Email and Calendar application accepts MIME charset tags. You do not need to perform any encoding conversion.

Plain Text Files

Plain text files do not have a charset tag. If the files are not in UTF-8, you must convert the encoding. For example, to convert a plain text file encoded in Traditional Chinese `big5` to UTF-8, you would type the following command:

```
iconv -f big5 -t UTF-8 input-filename > output-filename
```

You can also use File System Examiner for the encoding conversion.

You can use Text Editor to read and write character encoding text automatically or by specifying an encoding explicitly when opening or saving a file.

To start Text Editor, click Launch, then choose Applications → Accessories → Text Editor.

File Names and Directory Names

If file names and directory names using multibyte characters are not in UTF-8, you must convert the encoding. You can use File System Examiner to convert file and directory names and the contents of plain text files from legacy character encodings to UTF-8. Refer to the online Help for File System Examiner for more information.

To start File Systems Examiner, click Launch, then choose Applications → Utilities → File System Examiner.

When you access non-UTF-8 file or directory names on Microsoft Windows through SMB using File Manager, you can access the non-UTF-8 file or directory names without encoding conversion.

Launching Legacy Locale Applications

For applications that are not ready to migrate to Unicode UTF-8, you can create a launcher on the front panel to start the application in legacy locales. You can also launch the applications directly from the command line. Perform the following steps to create a launcher for an application.

1. Right-click the panel where you want to place the launcher.
2. Choose Add to Panel → Launcher.
3. Use the following format to type the entry in the Command field in the Create Launcher dialog box:

```
env LANG=locale LC_ALL=locale application-name
```

For example, if you want to launch an application called `motif-app` from `/usr/dt/bin` in the Chinese Big5 locale, you would type the following text in the Command field of the Create Launcher:

```
env LANG=zh_TW.BIG5 LC_ALL=zh_TW.BIG5 /usr/dt/bin/motif-app
```

4. Click OK to create the launcher on the panel.

When you need to run CLI (command-line interface) applications that are specific to a legacy locale, open a terminal window in the legacy locale first and then run the CLI applications in the same terminal window. To open a terminal window in a legacy locale, type the following command:

```
eng LANG=locale LC_ALL=locale GNOME-TERMINAL --disable-factory.
```

Instead of opening a new terminal window in a legacy locale, you can switch the locale setting from UTF-8 to a legacy locale in the current terminal window. Change the encoding through the Set Character Encoding menu in the terminal window. Then, you must also set the `LANG` and `LC_ALL` environment variables to the current shell.

Hardware for Some Keyboard Layouts Type 6 and 7 Not Available

Software support for some keyboard layouts has been added to the Oracle Solaris OS. This support gives users greater flexibility for keyboard input by enabling them to modify standard U.S. keyboard layouts for their own language needs.

Currently, no hardware is available for the following keyboard layout types.

| | |
|---------|-----------|
| Albania | Latvia |
| Belarus | Lithuania |

| | |
|------------------|-----------------------|
| Brazil Portugese | Malta UK |
| Croatia | Malta US |
| Czech | Poland |
| Denmark | Romania |
| Estonia | Serbia and Montenegro |
| French Canadian | Slovakia |
| Hungary | Slovenia |
| Iceland | |

Choose one of the following workarounds.

- **Workaround 1:** To take advantage of this keyboard support, set up keyboard input using the `kbd -s` command. For desktop sessions with the UTF-8 locale environment, use the Input Method Preference Editor. If the required keyboard layout is not listed, use Workaround 2.
- **Workaround 2:** Modify the `/usr/openwin/share/etc/keytables/keytable.map` file. For example, for the Canadian Type 6 keyboard, make the following changes:
 1. Change the `US6.kt` entry to `Canada6.kt` in the `/usr/openwin/share/etc/keytables/keytable.map` file. The modified entry should read as follows:

```
6          0          Canada6.kt
```

 2. Reboot the system for the changes to take effect.

Networking Issues

The following networking issues apply to this Oracle Solaris 10 release.

System Domain of Interpretation Is Not Configurable (15283123)

The system Domain of Interpretation (DOI) is not configurable. When the Solaris Management Console is used to create a new trusted network template, the console sets the DOI to `0` and Trusted Extensions does not function correctly. Various error messages are displayed.

Workaround: Set the DOI to `1` by using the Solaris Management Console.

IP Forwarding Is Disabled by Default in the Oracle Solaris 10 OS

In this release, IP forwarding is disabled by default. This setting applies to both IPv4 and IPv6 regardless of other system configurations. Systems with multiple IP interfaces that formerly forwarded IP packets by default no longer have this automatic feature. To enable IP forwarding in multihomed systems, you must manually perform additional configuration steps.

Workaround: The `routeadm` command enables IP forwarding. The configuration changes that are the result of `routeadm` usage persist across system reboots.

- To enable IPv4 forwarding, type the following command:

```
# routeadm -e ipv4-forwarding
```

- To enable IPv6 forwarding, type the following command:

```
# routeadm -e ipv6-forwarding
```

- To apply the enabled IP-forwarding configuration to the currently running system, type the following command:

```
# routeadm -u
```

For more information about IP forwarding, see the [routeadm\(1M\)](#) man page.

Oracle Solaris Commands and Standards

The following section describes behavior changes in certain commands and standards in this Oracle Solaris 10 OS release.

Changed Man Pages for Trusted Extensions Are in Reference Manual Only

The following Trusted Extensions man pages are revised for this release:

- `add_allocatable(1M)`
- `remove_allocatable(1M)`
- `label_to_str(3TSOL)`
- `tsol_getrhtype(3TSOL)`
- `tnzonecfg(4)`

The revised man pages cannot be viewed using the `man` command. To view the revised man pages, see the [Solaris Trusted Extensions Reference Manual](#).

New `ln` Utility Requires -f Option

The behavior of `/usr/bin/ln` has changed to adhere to all of the standards from SVID3 through XCU6. If you use the `ln` command without the `-f` option to link to an existing target file, the link is not established. Instead, a diagnostic message is written to standard error, and the command proceeds to link any remaining source files. Finally, the `ln` command exits with an error value.

For example, if file `b` exists, the syntax `ln a b` generates the following message:

```
ln: b: File exists
```

This behavior change affects existing shell scripts or programs that include the `ln` command without the `-f` option. Scripts that used to work might now fail in the Oracle Solaris 10 OS.

Workaround: Use the `-f` option with the `ln` command. If you have existing scripts that execute the link utility, make sure to modify these scripts to comply with the command's new behavior.

New `tcsh` Version Rejects `setenv` Variable Names That Use a Dash or an Equal Sign

In the Oracle Solaris 10 OS, `tcsh` has been upgraded to version 6.12. This version no longer accepts environment variables whose names use a dash or an equal sign. Scripts that contain `setenv` lines and that work in earlier Oracle Solaris versions might generate errors in the current release. The following error message is displayed:

```
setenv: Syntax error
```

For more information, see the `tcsh` man page.

Workaround: Do not use the dash or equals sign in names for environment variables.

STDIO `getc` Family EOF Condition Behavior Change

Applications that were built in strict standard C conformance mode are affected by the behavior changes of certain library functions. An example is applications that were compiled by using the `cc -Xc` or `c89` compilation mode. The behavior has changed for the following library functions:

- `fgetc()`
- `fgets()`
- `fgetwc()`
- `fgetws()`
- `getc()`
- `getchar()`

- `gets()`
- `getwc()`
- `getwchar()`
- `getws()`

A formal interpretation of the 1990 C Standard requires that after an end-of-file condition is set, no more data is returned from the file on subsequent input operations unless the file pointer is repositioned or the error and end-of-file flags are explicitly cleared by the application.

The behavior for all other compilation modes remains unchanged. Specifically, the interfaces can read additional newly written data from the stream after the end-of-file indicator has been set.

Workaround: Call the `fseek()` or `clearerr()` function on the stream to read additional data after the EOF condition has been reported.

Output Columns of the ps Command Have Been Widened

The columns of the `ps` command output have been widened because of larger UIDs, processor IDs, and cumulative execution time. Scripts should no longer assume fixed output columns.

Workaround: Scripts should use the `-o` option of the `ps` command.

For more information, see the [ps\(1\)](#) man page.

Solaris Volume Manager Bugs

The following Solaris Volume Manager bugs apply to the Oracle Solaris 10 1/13 release.

Solaris Volume Manager Does Not Remove Devices Correctly If fdisk Does Not Have Valid Entries

The `bcm_sata` SATA HBA driver supports SATA disks and SATA ATAPI devices. The driver supports RD1000, which is a removable SATA ATAPI device. The volume manager (`volmd`) does not create a node when the media in RD1000 does not have valid entries in `fdisk`. Therefore, the `rmformat` command does not perform as expected.

Workaround: Use the following workaround:

1. Turn off the volume manager (`volmd`).

```
# /etc/init.d/volmgt stop
```

2. Run the following commands as needed:

- fdisk
- rmformat
- format
- newfs
- mount

3. Restart the volume manager.

```
# /etc/init.d/volmgt start
```

Solaris Volume Manager metattach Command Might Fail

If you have a Solaris Volume Manager mirrored root (/) file system in which the file system does not start on cylinder 0, all submirrors that you attach must also not start on cylinder 0.

If you attempt to attach a submirror starting on cylinder 0 to a mirror in which the original submirror does not start on cylinder 0, the following error message is displayed:

```
can't attach labeled submirror to an unlabeled mirror
```

Workaround: Choose one of the following workarounds:

- Ensure that both the root file system and the volume for the other submirror start on cylinder 0.
- Ensure that both the root file system and the volume for the other submirror do not start on cylinder 0.

Note – By default, the JumpStart installation process starts swap at cylinder 0 and the root (/) file system somewhere else on the disk. Common system administration practice is to start slice 0 at cylinder 0. Mirroring a default JumpStart installation with root on slice 0 but not cylinder 0 to a typical secondary disk with slice 0 that starts at cylinder 0 can cause problems. This mirroring results in an error message when you attempt to attach the second submirror. For more information about the default behavior of the Oracle Solaris installation programs, see the Oracle Solaris 10 Installation Guides.

Java Desktop System Issues

This section describes issues that apply to the Java Desktop System (Java DS) in the Oracle Solaris 10 OS.

Email and Calendar Application

This section describes issues related to the Email and Calendar application.

Problem With Changing Authentication Type (15256650)

After you change the authentication type for the incoming mail server, the Email and Calendar application might not work correctly.

Workaround: Restart the Email and Calendar application.

Login Issues

This section describes login issues.

Login Error Message

You might encounter the following error message when you log in to a Java Desktop System session:

```
Could not look up internet address for hostname.  
This will prevent GNOME from operating correctly.  
It may be possible to correct the problem by adding  
hostname to the file /etc/hosts
```

Workaround: Ensure that your host name is set up correctly in the /etc/hosts file. Perform the following steps:

1. Set the host name in the /etc/hosts file as follows:

```
127.0.0.1 localhost loghost hostname  
localhost.localdomain
```

hostname is the name of your system.

2. Ensure that your host name is listed in the /etc/nodename file. This file must also contain the following line:

```
127.0.0.1 localhost loghost hostname  
localhost.localdomain
```

System-Level Issues

This section describes system-level issues.

User Preferences Not Fully Compatible

User preferences in your home account for an earlier version of the GNOME desktop might be partly incompatible with the version in Java Desktop System Release 3.

Workaround: Reset your preferences. Perform the following steps:

1. Log out of the Java Desktop System.
2. Click Session and choose Failsafe terminal.
3. Log in.
4. In the Failsafe terminal window, type the following command:

```
% gnome-cleanup exit
```

5. Log in again.

Your GNOME preferences are now reset.

Problem With Sound Recorder

The slide bar and the side counter do not work when the Sound Recorder is recording a new.wav file.

Workaround: None.

x86: Cannot Configure Full-Screen Magnification on Systems With One Video Card

If your Oracle Solaris 10 x86 based system has a single physical video card, you cannot configure the system for full-screen magnification. For such a configuration, you must use a separate configuration file in which you define values for a dummy driver. First, make sure that the Xserver is not running. Then perform the following steps:

1. Log in to a command-line session.
 - If you are using the GNOME Display Manager, follow these steps:
 - a. Log in to a session as a superuser.
 - b. At the prompt, type **svcadm disable application/gdm2-login**
 - c. Log in again as superuser.
 - If you are using dtlogin, follow these steps:
 - a. In the **dtlogin** window, click Options and select Command Line Login.
 - b. Log in as superuser.
2. Create a new **xorg.conf** file.

```
# /usr/X11/bin/Xorg -configure
```

This command creates the `xorg.conf.new` file in the root (/) directory.

3. Copy the new configuration file to the `/etc/X11` directory and rename the file `xorg.conf`.

```
# cp /xorg.conf.new /etc/X11/xorg.conf
```

4. Modify the file by adding the following sample configurations:

- Add a new monitor section.

```
Section "Monitor"
    Identifier  "monitor_dummy"
    ModelName   "dummy"
    HorizSync   10-200
    VertRefresh 20-90
EndSection
```

- Add a new device section.

```
Section "Device"
    BoardName   "dummy"
    Driver      "dummy"
    Identifier  "device_dummy"
    VendorName  "dummy"
    videoram   10000
EndSection
```

Note – You might need to adjust the `videoram` value, depending on the screen width, height, and color depth of your particular graphics card. The value in Kbytes must be large enough for the intended screen. For example, you can compute the value by using the formula `width * height * bpp/8`.

- Add a new screen section.

```
Section "Screen"
    DefaultDepth 24
    SubSection "Display"
        Depth      24
        Modes     "1280x1024"
    EndSubSection
    Device      "device_dummy"
    Identifier  "screen_dummy"
    Monitor    "monitor_dummy"
EndSection
```

Note – You might need to adjust the resolution value for your particular system setup.

5. Look for the following line under the `ServerLayout` section:

```
Screen      0  "Screen0" 0 0
```

6. Insert the following line below the line noted in the previous step:

```
Screen      1  "screen_dummy" RightOf "Screen0"
```

This new line defines Screen1, a second dummy screen that is notionally to the right of Screen0, the physical and primary screen.

7. Save the changes.
8. Reboot the system from the appropriate command-line session:
 - If you are using Gnome Display Manager:
 - a. Type **svcadm enable application/gdm2-login**.
 - b. Reboot the system.
 - If you are using dtlogin, reboot the system and log in.
9. Start the Gnopernicus screen reader.
10. Change the Startup Mode to Magnifier.
11. Click Preferences, then select Magnifier.
12. Click Add/Modify.
13. Assign the following values for the Magnifier preferences:
 - For Source: 0 . 1
 - For Zoomer Placement:
 - Left and Top: 0
 - Bottom and Right: maximum
14. Click Apply.

Because of the overlaying full-screen magnification zoomer, the Gnopernicus windows become invisible. However, full-screen magnification is now available.

System Administration Issues and Bugs

This section describes system administration issues and bugs in this Oracle Solaris 10 OS.

Oracle VTS **fputest** Fails on Fujitsu M10 Systems (15989998)

fputest in the Oracle Validation Test Suite (Oracle VTS) checks whether a particular instruction is valid on a system before testing it. This check results in an incorrect value for the Fujitsu M10 systems causing the test to fail with the **SIGILL** signal.

Oracle VTS testprobe_ramtest Fails on Fujitsu M10 Systems (15955560)

testprobe_ramtest in Oracle VTS fails on Fujitsu M10 systems. An error message similar to the following is displayed:

```
ERROR: Test probe testprobe_ramtest()  
Failed with segmentation violation (signal: 11)
```

Workaround: The fix for this issue might be available on MOS in a later revision of the Oracle VTS 7.0 Patch Set 15.

Oracle VTS testprobe_l3sramtest Fails on Fujitsu M10 Systems (15955589)

testprobe_l3sramtest in Oracle VTS fails on Fujitsu M10 systems. An error message similar to the following is displayed:

```
ERROR: Test probe testprobe_l3sramtest()  
Failed with segmentation violation (signal: 10)
```

Workaround: The fix for this issue might be available on MOS in a later revision of the Oracle VTS 7.0 Patch Set 15.

Crash Dump Is Saved in the /var/crash Directory (15767302)

Starting with the Oracle Solaris 10 1/13 release, by default, the crash dump file is saved in the /var/crash directory.

Note – Previously, the crash dump file was saved in the /var/crash/‘uname -n’ directory.

Using DISM Might Cause the System to Hang (15807808)

If you use the Dynamic Intimate Shared Memory (DISM) feature, there might be a performance regression and the system might hang depending on the size of the DISM used.

Workaround: Use one of the following workarounds depending on the architecture of your system.

For SPARC: Prevent the ISM and DISM from using a page size larger than 4 MB. Perform the following steps:

1. Add the following line in the `/etc/system` file.

```
set disable_ism_large_pages=0x74
```

2. Reboot the system.

For x86: Disable the support for a 1 GB page by setting the `enable_1gpg` variable to zero in `kMDB`. Perform the following steps:

1. Boot the system in `kMDB` mode.
2. Set the `enable_1gpg` variable to zero.

```
[0]> enable_1gpg/W 0
enable_1gpg: 0x1 = 0x0
```

x86: Running the `ludelete` Command Can Delete Shared Datasets Not Related To the OS (15817477)

Running the `ludelete` command can delete shared datasets that are not related to the OS in the following scenario.

Consider that a boot environment `BE2` is created from `BE1`. After booting into `BE2`, you create a dataset `dm2`, and also create a boot environment `BE3`. Subsequently, if you change your boot environment to `BE1` and choose to delete `BE2`, the dataset `dm2` is also deleted.

The following example explains the scenario.

Consider that you have an active boot environment `BE1` with an existing `poolname` that has various datasets containing data not related to the OS.

1. Create a boot environment `BE2`.

```
lucreate BE2
```

2. Activate `BE2` and reboot.

```
luactivate BE2; init 6
```

3. Create a new `zfs` dataset `dm2` under the existing `poolname`.

4. Create a new boot environment `BE3`.

```
lucreate BE3
```

5. Activate `BE1` and reboot.

```
luactivate BE1; init 6
```

The active boot environment is now `BE1`.

Note – The *poolname*/dm2 is not automatically mounted as it was not originally a part of BE1.

6. Mount dm2.

```
mount poolname/dm2
```

7. Delete boot environment BE2.

```
ludelete BE2
```

The *poolname*/dm2 dataset is deleted.

Oracle Solaris 10 9/10 Clock Stops on Oracle VM 2.2 (15643194)

Virtual machines (VMs) that are running Oracle Solaris 10 9/10 guests might face the following problems:

- The time of day clock can stop moving forward.
- Sleep can hang.
- The guest VM can hang entirely.

Workaround: The Oracle Solaris guests must be pinned to physical CPUs. Pin the domain's virtual CPUs to the host's physical CPUs as follows:

```
# xm vcpu-pin domain vcpu cpus
```

See the `xm(1)` man page for more information.

SPARC: FKU 137137-*xx* Patch Does Not Support Third-Party Volume Manager Software

The FKU 137137-*xx* patch does not support third-party volume manager software, with some exceptions. This lack of support is due to prepatch, postpatch, and postbackout implementation. If you use unsupported third-party volume manager software, you cannot apply the FKU patch. The following error message is displayed during patch installation:

```
unsupported root slice type xxxxx
```

Note that the Fujitsu and Veritas Volume Manager software is supported.

Workaround: None.

Oracle Solaris Is Unable to Handle Mode Switches Between Legacy and AHCI Modes for the SATA Controller (15376093)

On systems that have an AHCI compliant SATA controller, the BIOS setup typically enables the controller to be set in AHCI, legacy, or RAID modes. The Oracle Solaris OS supports AHCI and legacy modes.

The SATA mode setting in BIOS must not be changed after an initial Oracle Solaris installation. The SATA mode setting must also not be changed before or after an Oracle Solaris upgrade. If the SATA mode BIOS setting is modified after the Oracle Solaris 10 OS is installed, the system will reset and fail to boot without indicating what led to the failure.

Workaround: If a boot failure occurs as a result of changing the BIOS setting, revert back to the original setting in order to boot the Oracle Solaris OS.

32-bit: Possible Error With Applications When Obtaining the File System State on Large File Systems (15349751)

When run on large file systems, for example, ZFS, applications using the `statvfs(2)` or `statfs(2)` functions to get information about the state of the file system exhibit an error. The following error message is displayed:

```
Value too large for defined data type
```

Workaround: Applications should use the `statvfs64()` function instead.

Sun Patch Manager Tool 2.0 Incompatible With Previous Versions of the Tool

A system that runs Sun Patch Manager 2.0 from Oracle can manage remote systems that run Patch Manager, including Sun Patch Manager 1.0.

However, a system with an earlier version of Patch Manager cannot manage remote systems that run Patch Manager 2.0. Earlier versions include the following:

- Sun Patch Manager Base Software 1.x
- Sun Patch Manager 1.0

Note – Common Information Model/Web Based Enterprise Management (CIM/WBEM) support for Patch Manager does not exist in the Solaris 8 OS. Consequently, remote management with Patch Manager does not apply to Solaris 8 systems.

End-of-Software Support Statements

This chapter provides end-of-software support statements for the Oracle Solaris OS.

Features Removed in This Release

The following features have been removed in the current Oracle Solaris release.

32-bit: Adobe Flash Player

The Adobe Flash Player is not available in this release.

autoreg and basicreg Commands

The registration functionality that is provided by the `autoreg` and `basicreg` commands is not available in this release. The functionality includes `svc:/application/autoreg`, `regadm`, `svc:/system/basicreg`, `sconadm`, and `breg` commands. The registration functionality is provided by using OCM (Oracle Configuration Manager). For more information about OCM, see “[Oracle Configuration Manager 10.3.7.1](#)” in *Oracle Solaris 10 1/13 What’s New*.

glib 1.2.10 and gtk 1.2.10 Libraries

The `glib` 1.2.10 and `gtk` 1.2.10 libraries are no longer supported in the Oracle Solaris 10 release. Instead, use `glib` 2.4.1 and `gtk` 2.4.9.

Features That Might Be Removed in a Future Release

The following features might not be supported in a future release of the Oracle Solaris OS.

LP Print Service

The LP print service might not be included in a future Oracle Solaris release.

SPARC: Legacy System Support

- Support for legacy systems that have included the UltraSPARC I, II, IIe, III, IIIi, III+, IV, and IV+ processor architectures, as reported by the Oracle Solaris `psrinfo -pv` command, might be removed from a future Oracle Solaris release. All SPARC Enterprise M-Series servers and SPARC T-Series servers will continue to be supported.

Note – Oracle Solaris 10 will continue to be a supported operating system for these affected platforms as per the current Oracle lifetime support policy.

- The following SPARC workstations might not be supported in a future Oracle Solaris release:
 - Ultra 2, 3, 5, 10, 25, 30, 45, 60, and 80
 - Sun Blade 100, 500, 1000, 1500, 2000, and 2500

Continue using the Oracle Solaris 10 OS for the remaining life of the hardware. Then, migrate to either an x64 workstation or a Sun Ray desktop.

rstart Client and rstartd Server

The `rstart` client and `rstartd` server might not be included in a future Oracle Solaris release. To start an X Window system program on another machine, use the X11 forwarding feature of the `ssh(1)` command.

rdist Command

The `rdist` command might be removed in a future Oracle Solaris release.

crypt Command

The `crypt(1)` command might be removed in a future Oracle Solaris release. Instead, you can use the `encrypt(1)` command, which provides access to new and secure algorithms, to protect your files.

The `encrypt(1)` command is available starting from this Oracle Solaris 10 release.

-x and -C Options in the vi, ex, and ed Commands

The `-x` and `-C` options for the `vi(1)`, `ex(1)`, and `ed(1)` commands might be removed in a future Oracle Solaris release. Instead, you can use the `encrypt(1)` command, which provides access to new and secure algorithms, to protect your files.

The `encrypt(1)` command is available starting from this Oracle Solaris 10 release.

sysidtool Framework

Managing the configuration of an Oracle Solaris instance by using the `sysidtool(1M)` framework might not be possible in a future Oracle Solaris release. You can use the `smf(5)` system configuration framework for managing the configuration of an Oracle Solaris instance.

Sun OpenGL Software From Oracle for the SPARC Platform

The Sun OpenGL software from Oracle for the SPARC platform might no longer be included in a future Oracle Solaris release. Instead, you can use the Mesa implementation of `libGL` or the Nvidia OpenGL provided for Nvidia graphics devices on the x64 platform, which provide the same functionality.

WU-ftp Server

The Oracle Solaris FTP server based on `WU-ftp` might not be available in a future release of the Oracle Solaris OS. The `WU-ftp` server might be replaced with a new FTP server.

Boot Support in Solaris Volume Manager From Oracle

The ability to boot from a Solaris Volume Manager (SVM) `metadevice` might not be supported in the next release of the Oracle Solaris OS.

ioctls Floppy Driver and fdformat Utility

The `ioctls` (`fdio`) floppy driver and the `fdformat` utility might be removed in the next Oracle Solaris release. However, the support for the USB floppy will continue.

Note – The floppy drivers `fd` and `fdc` are already removed.

tnf Tracing (3TNF)

The `tnf` tracing (3TNF) facility might not be available in a future Oracle Solaris release. Instead, use `dtrace(1M)` for tracing purposes.

Replacing /etc/power.conf and pmconfig With poweradm

The `/etc/power.conf` configuration file and the `pmconfig(1M)` utility might be replaced with the `poweradm(1M)` command in a future Oracle Solaris release. The number of properties that can be configured with the `poweradm(1M)` command will be minimal.

Replacing Trusted Extensions IPv6 CIPSO With CALIPSO

Oracle might replace the IPv6 Commercial Internet Protocol Security Option (CIPSO) implementation with the IETF CALIPSO standard in a future Oracle Solaris release.

Commercial Internet Protocol Security Option (CIPSO), defined in FIPS PUB 188, is a standard for IPv4. The Trusted Extensions feature of Oracle Solaris has a proprietary IPv6 implementation of CIPSO because no CIPSO equivalent standards existed for IPv6 when Trusted Extensions was released.

IETF has now produced a CIPSO equivalent standard for IPv6, called Common Architecture Label IPv6 Security Option (CALIPSO) or RFC 5570.

The current CIPSO IPv4 support is not affected. CIPSO and CALIPSO are used by Trusted Extensions only.

/etc/hostname.interface Files

The `/etc/hostname.interface` files that are used to store persistent network configuration might be removed in a future Oracle Solaris release.

Flash Archive Installation Commands

The following flash archive installation commands might not be included in a future Oracle Solaris release:

- `flar(1M)`
- `flarccreate(1M)`

In addition, installations performed by using the `flash_archive(4)` file format might not be supported.

x86: `lsimiga` Driver Support

The `lsimiga(7d)` driver might not be included in a future release. If you are using devices that are driven by `lsimiga(7d)`, migrate to `glm(7d)` or upgrade to more recent hardware.

Removal of QLogic SCSI Ultra160 Device Driver

The `qus` device driver might be removed from a future Oracle Solaris release. The `qus` device driver supports the QLogic Ultra160 SCSI host bus adapter.

32-bit SPARC and x86: `libmle` Library

The `libmle` library might not be included in a future Oracle Solaris release.

32-bit SPARC: Removal of Asian SunOS4.x BCP

The support for all versions of Asian SunOS4 BCP might not be included in a future Oracle Solaris release. However, you can continue to use all versions of Asian SunOS4 BCP in Oracle Solaris 10 branded zones.

32-bit SPARC and x86: Removal of Legacy Asian Print Filters

The following legacy Asian print filters might not be included in a future Oracle Solaris release:

- `big5.epson.filter(1)`
- `cns.epson.filter(1)`
- `jprconv(1)`
- `jpostprint(1)`

- `jtops(1)`
- `thaifilter(1)`

For text to PS conversion, use the `mp(1)` filter.

32-bit SPARC and x86: Removal of Legacy Asian Libraries

The following legacy Asian libraries, including their `xctype` macros, might not be included in a future Oracle Solaris release:

- `libcle`
- `libhle`
- `libkle`

Instead of these libraries, use the standard functions `iconv(3C)` and `wctype(3C)`. Note that you might be able to use these libraries in Oracle Solaris 10 branded zones.

32-bit SPARC and x86: Removal of Legacy Asian Commands

The following Asian legacy commands might not be included in a future Oracle Solaris release:

- EUC capable `mailx(1)`, `talk(1)`, `in.comsat(1M)`, and `install_comsat(1M)` under the `/usr/SUNWale/bin` directory
- Legacy utilities such as `jaio.h(7i)`, `jtty(1)`, `kanji(1)`, `evftobdf(1)`, `runb5(1)`, and `mkcodetab(1)`
- Legacy code set that include the following converters:
 - ja locale – `euctoibmj ibmjtoeuc euctojis jistoeuc euctosj sjtoeuc jistosj sjtojis`
 - ko locale – `wansungtojohap johaptowansung comptonb nbtocomp comptopack packtocomp`
 - zh locale – `cgbtoeuc euctocgb cnstoeuc euctocns`
 - zh_TW locale – `big5toeuc euctobig5 cnsconv`

Use the `iconv(1)` command instead of the legacy code set converters. Note that you might be able to use these commands in Oracle Solaris 10 branded zones.

Diskless Client Functionality

The diskless client functionality might not be supported. The following commands might be affected:

- `smdiskless(1M)`
- `smoservice(1M)`

SPARC: SunOS 4 Binary Compatibility Support

All versions of the SunOS 4 binary compatibility support might not be included in a future Oracle Solaris release. However, the support for all versions of SunOS 4 binaries will continue when used in Oracle Solaris 10 branded zones.

32-bit x86: sk98sol Driver

The `sk98sol` driver for SysKonnect/Marvell SK-Net gigabit Ethernet devices might be removed in a future Oracle Solaris release.

IP-Forwarding SMF Services

IP-forwarding SMF services manage system-wide forwarding configuration. The following IP-forwarding SMF services might be removed in a future Oracle Solaris release:

- `svc:/network/ipv4-forwarding:default`
- `svc:/network/ipv6-forwarding:default`

x86: 32-bit X Servers and Drivers

The 32-bit versions of the following X servers for x86 platforms might not be included in a future Oracle Solaris release:

- `Xephyr`
- `Xorg`
- `Xvfb`
- `Xvnc`

Note – SPARC platforms provide only the 64-bit versions of these servers.

Any `Xorg` loadable module, including video drivers, input device drivers, and extensions, that are not provided in a 64-bit version will not be used. If a usable video driver is not found, `Xorg` will use the `vesa` driver.

The following table shows x86 video devices that include the Xorg drivers in 32-bit versions.

| Video Device | Driver Name |
|-------------------------|--------------|
| Alliance Promotion | apm |
| Ark Logic | ark |
| Chips & Technologies | chips |
| 3Dlabs/TI glint | glint |
| Number Nine Imagine 128 | i128 |
| Intel i740 | i740 |
| NeoMagic | neomagic |
| Rendition Verite | rendition |
| S3 | s3 |
| S3 ViRGE & Trio3D | s3virge |
| S3 Savage | savage |
| Silicon Motion | silicomotion |
| SiS & XGI | sis |
| 3Dfx | tdfx |
| DEC 21039/TGA | tga |
| Tseng Labs | tseng |

The man pages for each driver give more information on the supported devices. If you want to build and support the driver yourself, the source for these drivers is available from the X.Org foundation at <http://www.x.org/>.

SYSV3 SCO Compatibility Environment Variable

Support for the SYSV3 SCO compatibility environment variable might be removed in a future Oracle Solaris release. The following commands might be affected:

- df
- echo
- expr
- sh
- tar
- uname

passmgmt Command

The `passmgmt` command might be removed in a future Oracle Solaris release. You can use the following commands instead, which provide the same functionality:

- [useradd\(1M\)](#)
- [userdel\(1M\)](#)
- [usermod\(1M\)](#)
- [roleadd\(1M\)](#)
- [roledel\(1M\)](#)
- [rolemod\(1M\)](#)

Locale Administrator

The `localeadm(1M)` command might not be available in a future Oracle Solaris release.

SIP Express Router (SER)

SER and SERWeb might not be included in a future Oracle Solaris release.

Jakarta Tomcat 4 Interfaces in the Oracle Solaris OS

Jakarta Tomcat 4 might not be included in a future Oracle Solaris release. You can migrate to either Apache Tomcat 5.5 or Apache Tomcat 6, which provide the same functionality.

x86:lx Branded Zone

The `lx` brand uses the branded zones framework to enable Linux binary applications to run unmodified on a machine with an Oracle Solaris OS kernel.

Support for the `lx` branded zone might be removed in a future Oracle Solaris Zones release.

Plotting Commands

The following plotting commands might not be supported in a future Oracle Solaris release:

- `aedplot`
- `atoplot`
- `bgplot`
- `crtplot`

- dumbplot
- gigiplot
- hp7221plot
- hpplot
- implot
- plot
- plottoa
- vplot
- t300
- t300s
- t4013
- t450
- tek

In addition, the `-g` option of LPR might no longer be supported in a future Oracle Solaris release.

MySQL 4

MySQL 4 RDBMS might not be supported in a future Oracle Solaris release. You can migrate to MySQL 5.1, which provides the same functionality.

Apache httpd 1.3

Apache httpd 1.3 might not be supported in a future Oracle Solaris release. You can migrate to Apache httpd 2 which provides the same functionality.

audit_user Database

The `audit_user(4)` database and the `getuauusername(3BSM)` accessor functions might be removed in a future Oracle Solaris release. The per-user audit preselection flags might be specified differently.

Audit Daemon Interfaces

The following interfaces that are used by the Oracle Solaris audit daemon might not be supported in a future release:

- `auditsvc(2)`
- `audit_data(4)`

Oracle Solaris Audit Commands

The following Oracle Solaris audit interfaces might be replaced with an equivalent functionality in a future release of Oracle Solaris:

- `audit_control(4)`
- `audit_startup(1M)`
- `bsmconv(1M)`
- `bsmrecord(1M)`
- `bsmuncconv(1M)`

Auditing File Size Statistics and File Size Restriction Interfaces

The auditing file size statistics and file size restriction interfaces `getfsize` and `setfsize`, consisting of the similarly named subcommands within the `auditon(2)` system call and the options to the `auditconfig(1M)` command, might not be supported in a future Oracle Solaris release.

Drivers for Various SPARC Compatible Graphics Cards

The following drivers for graphics cards on the SPARC platform might not be included in a future Oracle Solaris release.

| Card/Device | Driver Name |
|-------------------------------------|-------------|
| Creator, Creator3D | ffb |
| Elite3D | afb |
| Expert3D, Expert3D Lite | ifb |
| GX, GXplus, TurboGX, TurboGXplus | cg6 |
| PGX | m64 |
| PGX32 | gfp |
| PGX64 | m64 |
| Sun Blade 100/150 on-board graphics | m64 |
| Ultra 3 laptop on-board graphics | m64 |
| Ultra 5/10 on-board graphics | m64 |
| XVR-200 | mko |

| Card/Device | Driver Name |
|-------------|-------------|
| XVR-500 | ifb |
| XVR-600 | jfb |
| XVR-1000 | gfb |
| XVR-1200 | jfb |
| XVR-2500 | kfb |
| XVR-4000 | zulu |

Short Form Locales

The following table lists locales that might be removed in a future Oracle Solaris release. The table also lists the corresponding replacement locales.

| Locales to be Removed | Replacement Locales |
|-----------------------|---------------------|
| ar | ar_ES.IS08859-6 |
| bg_BG | bg_BG.IS08859-5 |
| ca | ca_ES.IS08859-1 |
| ca_ES | ca_ES.IS08859-1 |
| cs | cs_CZ.IS08859-2 |
| cs_CZ | cs_CZ.IS08859-2 |
| da | da_DK.IS08859-1 |
| da_DK | da_DK.IS08859-1 |
| da.IS08859-15 | da_DK.IS08859-15 |
| de | de_DE.IS08859-1 |
| de_AT | de_AT.IS08859-1 |
| de_CH | de_CH.IS08859-1 |
| de_DE | de_DE.IS08859-1 |
| de.IS08859-15 | de_DE.IS08859-15 |
| de.UTF-8 | de_DE.UTF-8 |
| el | el_GR.IS08859-7 |

| Locales to be Removed | Replacement Locales |
|-----------------------|---------------------|
| el_GR | el_GR.IS08859-7 |
| el.sun_eu_greek | el_GR.IS08859-7 |
| el.UTF-8 | el_CY.UTF-8 |
| en_AU | en_AU.IS08859-1 |
| en_CA | en_CA.IS08859-1 |
| en_GB | en_GB.IS08859-1 |
| en_IE | en_IE.IS08859-1 |
| en_NZ | en_NZ.IS08859-1 |
| en_US | en_US.IS08859-1 |
| es | es_ES.IS08859-1 |
| es_AR | es_AR.IS08859-1 |
| es_BO | es_BO.IS08859-1 |
| es_CL | es_CL.IS08859-1 |
| es_CO | es_CO.IS08859-1 |
| es_CR | es_CR.IS08859-1 |
| es_EC | es_EC.IS08859-1 |
| es_ES | es_ES.IS08859-1 |
| es_GT | es_GT.IS08859-1 |
| es.IS08859-15 | es_ES.IS08859-15 |
| es_MX | es_MX.IS08859-1 |
| es_NI | es_NI.IS08859-1 |
| es_PA | es_PA.IS08859-1 |
| es_PE | es_PE.IS08859-1 |
| es_PY | es_PY.IS08859-1 |
| es_SV | es_SV.IS08859-1 |
| es.UTF-8 | es_ES.UTF-8 |
| es_UY | es_UY.IS08859-1 |
| es_VE | es_VE.IS08859-1 |

| Locales to be Removed | Replacement Locales |
|-----------------------|---------------------|
| et | et_EE.IS08859-15 |
| et_EE | et_EE.IS08859-15 |
| fi | fi_FI.IS08859-1 |
| fi_FI | fi_FI.IS08859-1 |
| fi.IS08859-15 | fi_FI.IS08859-15 |
| fr | fr_FR.IS08859-1 |
| fr_BE | fr_BE.IS08859-1 |
| fr_CA | fr_CA.IS08859-1 |
| fr_CH | fr_CH.IS08859-1 |
| fr_FR | fr_FR.IS08859-1 |
| fr.IS08859-15 | fr_FR.IS08859-15 |
| fr.UTF-8 | fr_FR.UTF-8 |
| he | he_IL.IS08859-8 |
| he_IL | he_IL.IS08859-8 |
| hr_HR | hr_HR.IS08859-2 |
| hu | hu_HU.IS08859-2 |
| hu_HU | hu_HU.IS08859-2 |
| is_IS | is_IS.IS08859-1 |
| it | it_IT.IS08859-1 |
| it.IS08859-15 | it_IT.IS08859-15 |
| it_IT | it_IT.IS08859-1 |
| it.UTF-8 | it_IT.UTF-8 |
| ja | ja_JP.eucJP |
| ko | ko_KR.EUC |
| ko.UTF-8 | ko_KR.UTF-8 |
| lt | lt_LT.IS08859-13 |
| lt_LT | lt_LT.IS08859-13 |
| lv | lv_LV.IS08859-13 |

| Locales to be Removed | Replacement Locales |
|-------------------------|---------------------|
| lv_LV | lv_LV.IS08859-13 |
| mk_MK | mk_MK.IS08859-5 |
| nl | nl_NL.IS08859-1 |
| nl_BE | nl_BE.IS08859-1 |
| nl.IS08859-15 | nl_NL.IS08859-15 |
| nl_NL | nl_NL.IS08859-1 |
| no | nb_NO.IS08859-1 |
| no_NO | nb_NO.IS08859-1 |
| no_NO.IS08859-1@bokmal | nb_NO.IS08859-1 |
| no_NO.IS08859-1@nynorsk | nn_NO.IS08859-1 |
| no_NY | nn_NO.IS08859-1 |
| pl | pl_PL.IS08859-2 |
| pl_PL | pl_PL.IS08859-2 |
| pl.UTF-8 | pl_PL.UTF-8 |
| pt | pt_PT.IS08859-1 |
| pt_BR | pt_BR.IS08859-1 |
| pt.IS08859-15 | pt_PT.IS08859-15 |
| pt_PT | pt_PT.IS08859-1 |
| ro_RO | ro_RO.IS08859-2 |
| ru | ru_RU.IS08859-5 |
| ru.koi8-r | ru_RU.KOI8-R |
| ru_RU | ru_RU.IS08859-5 |
| ru.UTF-8 | ru_RU.UTF-8 |
| sh | bs_BA.IS08859-2 |
| sh_BA | bs_BA.IS08859-2 |
| sh_BA.IS08859-2@bosnia | bs_BA.IS08859-2 |
| sh_BA.UTF-8 | bs_BA.UTF-8 |
| sk_SK | sk_SK.IS08859-2 |

| Locales to be Removed | Replacement Locales |
|-----------------------|------------------------------------|
| sl_SI | sl_SI.IS08859-2 |
| sq_AL | sq_AL.IS08859-2 |
| sr_CS | sr_ME.UTF-8 or sr_RS.UTF-8 |
| sr_CS.UTF-8 | sr_ME.UTF-8 or sr_RS.UTF-8 |
| sr_SP | sr_ME.IS08859-5 or sr_RS.IS08859-5 |
| sr_YU | sr_ME.IS08859-5 or sr_RS.IS08859-5 |
| sr_YU.IS08859-5 | sr_ME.IS08859-5 or sr_RS.IS08859-5 |
| sv | sv_SE.IS08859-1 |
| sv_SE | sv_SE.IS08859-1 |
| sv.IS08859-15 | sv_SE.IS08859-15 |
| sv.UTF-8 | sv_SE.UTF-8 |
| th | th_TH.TIS620 |
| th_TH | th_TH.TIS620 |
| th_TH.IS08859-11 | th_TH.TIS620 |
| tr | tr_TR.IS08859-9 |
| tr_TR | tr_TR.IS08859-9 |
| zh | zh_CN.EUC |
| zh.GBK | zh_CN.GBK |
| zh_TW | zh_TW.EUC |
| zh.UTF-8 | zh_CN.UTF-8 |

Support for Java SE 1.4.2

Support for Java Platform, Standard Edition (Java SE) 1.4.2 might be removed in a future Oracle Solaris release. To receive critical fixes, consider the following options:

- Migrate to Java SE for Business 1.4.2.
- Migrate to the latest Java SE release.

For information about the technology support and EOL policy for Java SE, see <http://www.oracle.com/technetwork/java/eol-135779.html>.

Support for Java SE 5.0

Support for Java SE 5.0 might be removed in a future Oracle Solaris release. To receive critical fixes, consider the following options:

- Migrate to Java SE for Business 5.0
- Migrate to the latest Java SE release

For information about technology support and EOL policy, see <http://www.oracle.com/technetwork/java/eol-135779.html>.

@euro Locale Variants

The following @euro locale variants might be removed in a future Oracle Solaris release:

| | |
|-----------------------|-----------------------|
| ca_ES.ISO8859-15@euro | fr_BE.ISO8859-15@euro |
| de_AT.ISO8859-15@euro | fr_BE.UTF-8@euro |
| de_DE.ISO8859-15@euro | fr_FR.ISO8859-15@euro |
| de_DE.UTF-8@euro | fr_FR.UTF-8@euro |
| el_GR.ISO8859-7@euro | it_IT.ISO8859-15@euro |
| en_IE.ISO8859-15@euro | it_IT.UTF-8@euro |
| es_ES.ISO8859-15@euro | nl_BE.ISO8859-15@euro |
| es_ES.UTF-8@euro | nl_NL.ISO8859-15@euro |
| fi_FI.ISO8859-15@euro | pt_PT.ISO8859-15@euro |

Use the corresponding non-variant locales.

ucblinks Command

The ucblinks feature that created Oracle's SunOS 4.x device name links in the /dev directory might not be supported in a future Oracle Solaris release. The current release uses SunOS 5.x device names.

The following table lists the SunOS 4.x device name links that might be removed.

| SunOS 4.x Device Name | Device Type |
|-----------------------|-------------|
| /dev/[r]fd%d | fd floppy |

| SunOS 4.x Device Name | Device Type |
|-----------------------|----------------|
| /dev/[r]sr%d | sd/atapi cdrom |
| /dev/[r]sd%d | sd disk |
| /dev/[r]n%d | st tape |

The following table lists the current SunOS 5.x device name links.

| SunOS 5.x Device Name | Device Type |
|-----------------------|----------------|
| /dev/[r]diskette | fd floppy |
| /dev/[r]dsk/* | sd/atapi cdrom |
| /dev/[r]dsk/* | sd disk |
| /dev/rmt/* | st tape |

Xprt Server and Xprint Extension

The **Xprt** server and **Xprint** extension to the X Window System might no longer be included in a future Oracle Solaris release. The **libXp** library will remain for binary compatibility. This library enables existing users of this software to continue printing over the network to **Xprt** servers running Oracle Solaris 10 and prior releases, or **Xprint** implementations on other platforms.

xmh Command

The **xmh** command might no longer be included in a future Oracle Solaris release. Thunderbird and Evolution are the supported email applications.

XIE Libraries

X Imaging Extension (XIE) libraries might no longer be included in a future Oracle Solaris release.

bdftosnf and showsnf Commands

The **bdftosnf** and **showsnf** commands might no longer be included in a future Oracle Solaris release.

PostgreSQL 8.1 and 8.2

PostgreSQL versions 8.1 and 8.2 might not be supported in a future Oracle Solaris release.

Note – PostgreSQL 8.1 and all its interfaces are obsoleted in the Oracle Solaris 10 OS. You must migrate your applications to a later PostgreSQL version available in the Oracle Solaris OS.

Locale Variant cz

The cz short variant for the Czech locale might be removed in a future Oracle Solaris release. Use the following Czech locales instead:

- cs_CZ
- cs_CZ.ISO8859-2
- cs_CZ.UTF-8
- cs_CZ.UTF-8@euro

xorgcfg and xorgconfig Utilities

The xorgcfg and xorgconfig utilities for generating xorg.conf files might no longer be available in a future Oracle Solaris release.

The Xorg(1) server does not require an xorg.conf(4) file in many cases and will autoconfigure itself if the file is not present. Use one of the following alternative methods to generate an xorg.conf file for customization if the default configuration does not meet your needs:

- When the server is not already running, /usr/X11/bin/Xorg -configure provides a sample configuration file for the currently detected hardware in the system.
- When the Xorg server is started without a configuration file, the xorg.conf data that Xorg automatically generates is logged in the /var/log/Xorg.0.log log file. The xorg.conf data might also be copied to an xorg.conf file for customization.
- Users of NVIDIA graphics devices should use the provided nvidia-settings(1) and nvidia-xconfig(1) utilities to generate or update device-specific configurations.
- Users of Oracle's Sun graphics devices for the SPARC platform should use the fbconfig(1) utility to generate or update device-specific configurations.

Oracle Berkeley DB 4.2

Oracle Berkeley DB 4.2 might not be supported in a future Oracle Solaris release.

Some audiorecord and audioplay Application Switches

The `-p` and `-b` switches in both the `audiorecord` and `audioplay` applications, as well as the `-m` switch in `audiorecord` might be removed in a future Oracle Solaris release.

If a filename is not specified on the command line and standard input and output is not a TTY, both applications will exit with an error. Any changes to audio volume settings made by these applications are not persistent from one instance to the next. If you want to adjust audio device settings, migrate to the `mixerctl(1)` and `gnome-volume-control(1)` applications.

Policy Change for Inbound Open-Source and Third-Party, Vendor-Supplied Open-Source Components

When the open-source community stops the development of inbound open-source components such as Mozilla projects, Oracle will also stop all the development and support activities of that product version. Component end-of-software announcements will appear in the Release Notes document.

Mozilla 1.X Support

Starting from the Solaris 10 10/08 release, the Mozilla 1.X software is no longer supported as a result of the new inbound open-source components policy change. Users should upgrade to Firefox.

x86: sbpro Driver

The Sound Blaster Pro device driver (`sbpro`) for Sound Blaster Pro, Sound Blaster 16, and Sound Blaster AWE32 ISA devices might not be supported in a future Oracle Solaris release.

CacheFS File System

The CacheFS file system might not be supported in a future Oracle Solaris release.

sdtudctool Command

The `sdtudctool` command might not be available in a future Oracle Solaris release. For more information, see User Defined Characters Migration Guide at <http://developers.sun.com/global/products/platforms/solaris/reference/techart/UDCGuide.html>

ctlmp and ctlconvert_txt Utilities

The /usr/openwin/bin/ctlmp and /usr/openwin/bin/ctlconvert_txt utilities might not be supported in a future Oracle Solaris release. Use the mp(1) print filter or another suitable printing mechanism.

genlayouttbl Utility

The genlayouttbl(1) utility which provides complex text layout data to the CDE/Motif GUI toolkit might not be available in a future Oracle Solaris release.

Mobile IPv4

The Mobile IPv4 feature described in the mipagent(1M) man page might not be available in a future Oracle Solaris release.

Gnopernicus

Gnopernicus, the Java Desktop System Screen Reader might not be available in a future Oracle Solaris release. Use the Orca Screen Reader instead.

Xsun Server

The Xsun server for the X Window System might not be available in a future Oracle Solaris release. Users should migrate to the Xorg server.

Features such as Display Postscript (DPS) and X Image Extension (XIE) that are available in Xsun but not in Xorg might no longer be included.

Common Desktop Environment

The Common Desktop Environment (CDE) might not be available in a future Oracle Solaris release. Users should migrate to the Java Desktop System.

Sun Java System Calendar Server Client Applet

The Sun Java System Calendar Server client applet, Now, might not be available in a future Oracle Solaris release.

DARPA Trivial Name Server

The DARPA trivial name server, `in.tnamed(1M)`, might not be available in a future Oracle Solaris release. The Internet domain name server `named(1M)` provides similar functionality.

I2O Intelligent I/O

The I2O intelligent I/O driver framework and all corresponding drivers might not be supported in a future Oracle Solaris release. This technology includes the `i2o_bs(7D)`, and `i2o_scsi(7D)` drivers, and all I2O related functionality.

GNOME Viewer for PDF and PostScript Files

The GNOME viewer for PDF and PostScript files, might not be available in a future Oracle Solaris release. A replacement application might be provided to enable viewing of PDF and PostScript files.

Smartcard Administrative Interface

The Smartcard administrative graphical interface `sdtsmartcardadmin(1M)` might not be available in a future Oracle Solaris release. The same functionality is available through the `smartcard(1M)` command.

iButton Smartcard

The Dallas Semiconductor iButton Java Card Smartcard and OpenCard Framework (OCF) terminal driver, as described in the `ocf_ibutton(7d)` man page, might not be supported in a future Oracle Solaris release. Migrate to other Smartcard devices that are supported by the `libpcslite(3LIB)` utility.

Cyberflex Smartcard

The Cyberflex Smartcard might not be supported by the `pam_smartcard(5)` and `smartcard(1M)` commands in a future Oracle Solaris release. Migrate to other Smartcard devices and cards that are supported by the `libpcslite(3LIB)` utility.

PAM Smartcard

The PAM Smartcard module `pam_smartcard(5)` might not be available in a future Oracle Solaris release.

OCF or SCF Smartcard Framework

The OCF or SCF Smartcard framework might not be available in a future Oracle Solaris release. The functionality of `ocfserv(1M)` will be provided by `pcscd(1M)`. The card provisioning functionality of `smartcard(1M)` will be provided by `muscletool(1M)`. The driver configuration functionality provided by `smartcard(1M)` is generally not necessary with `pcscd(1M)`. However, when required, system administrators can edit the `reader.conf(4)` file accordingly.

SCF Smartcard APIs

The SmartCard Framework (SCF) interfaces exported by `libsmartcard` and `smartcard.jar` might not be available in a future Oracle Solaris release. These interfaces are now obsolete. New C applications should be written to use the PS/SC interfaces exported from `libpscslite(3LIB)`. There is no planned replacement for the SCF Java interfaces at this time.

Remote Program Load Server Functionality

The Remote Program Load (RPL) server functionality available through `rpld(1M)` and `rpld.conf(4)` might not be available in a future Oracle Solaris release.

Transition From `ipge` to `e1000g` NIC Driver as the Default Ethernet Driver for sun4v Systems

The `ipge` driver and all its `SUNWipge` packages for sun4v systems might not be available in a future Oracle Solaris release. Starting with the Solaris 10 8/07 release, Ontario and other SPARC based platforms transition from `ipge` to `e1000g` drivers. The `e1000g` driver is the default Ethernet driver for all Oracle platforms that use Intel 1G chipsets.

Solstice Enterprise Agents Support

The following Solstice Enterprise Agents (SEA) agents, libraries, and packages might not be supported in a future Oracle Solaris release:

- SEA-based SNMP master agent and subagents
- `libssagent` and `libssasnmp` libraries
- `SUNWsaom`, `SUNWsaasn`, `SUNWmibii` packages

The System Management Agent (SMA) provides similar functionality for these resources.

32-bit x86: Extended Memory File System Support

The extended memory file system (`xmemfs`) might not be supported in a future Oracle Solaris release.

For more information, see the `xmemfs(7FS)` man page.

Standard Type Services Framework Support

The Standard Type Services Framework (STSF) might not be available in a future Oracle Solaris release.

This framework includes the following:

- `libST` and `libXst` libraries
- `xstls` command
- `stfsloader` service
- XST extension to Xsun and Xorg servers

You can find this functionality in one of the following alternative sources:

- `libX11`
- `libXft2`

SPARC: j fca Driver Support

The JNI Fibre Channel Adapter (`j fca`) driver might not be available in a future Oracle Solaris release. For more information, see the `j fca(7D)` man page.

`zic -s` Option Support

The `-s` option of the `zic` command might not be available in a future Oracle Solaris release. For more information, see the `zic(1M)` man page.

Removable Volume Management Support

The volume management daemon (`vold`), volume management file system (`volfs`), and the associated volume management commands might not be included in a future Oracle Solaris release. Automatic mounting and unmounting of removable media will continue to be supported.

For more information, see the `vold(1M)` and `volfs(7FS)` man pages.

64-bit SPARC: Dual Basic Rate ISDN Interface and Multimedia Codec Chips

T5900FC Dual Basic Rate ISDN Interface (DBRI) and associated multimedia codec chips might not be supported in a future Oracle Solaris release. In addition, device drivers written for these devices might not be supported.

SPARC: Certain Drivers Might Not Be Supported in a Future Oracle Solaris Release

The following drivers might not be supported in a future Oracle Solaris release:

- SUNWrvc – Device driver for the SunVideo real-time video capture and compression card
- SUNwdial – Streams module for the Dials and Buttons devices
- SUNwdialh – Header files for the Dials and Buttons devices

Automated Security Enhancement Tool Support

The checksum functionality provided by the Automated Security Enhancement Tool (ASET) in the `/usr/aset` directory will be deprecated in a subsequent release. To replicate the functionality, use the Basic Audit Reporting Tool (BART), which is available at `/usr/bin/bart`.

Asian Short dtlogin Names

The following Asian short locale names might not be listed in the `dtlogin` language list in a future release:

- ko
- zh
- zh_TW

Beginning with the Solaris 8 release, the following ISO-standard locale names are provided:

- ko_KR.EUC
- ko_KR.UTF-8
- zh_CN.EUC
- zh_CN.GBK
- zh_CN.UTF-8
- zh_TW.EUC

Cfront Runtime Support Library

The `libC.so.3` library is the runtime support library for programs that are compiled by the Cfront C++ compiler C++ 3.0. Neither the compiler nor programs that are created by the compiler run on the Oracle Solaris 10 OS. The library might not be supported in a future release of Oracle Solaris.

Configuration Administrations's fp Plug-In Hardware Options

The following options of the configuration administration (`cfgadm`) fp plug-in might not be supported in a future Oracle Solaris release:

- `show_FCP_dev`
- `unusable_FCP_dev`

Device Allocation Interfaces for the Basic Security Module

The following components of the device allocation mechanism of the Basic Security Module might not be included in a future Oracle Solaris release:

- `mkdevalloc(1M)`
- `mkdevmaps(1M)`
- `/etc/security/dev`

Obsolete Device Driver Interfaces

Some device driver interfaces (DDI) might not be supported in a future Oracle Solaris release.

The following table lists the DDIs that might not be supported, along with the preferred DDI alternatives.

| Obsolete Interface | Preferred Interface |
|-----------------------|-----------------------------|
| <code>mmap</code> | <code>devmap</code> |
| <code>identify</code> | <code>set_to_nulldev</code> |
| <code>copyin</code> | <code>ddi_copyin</code> |
| <code>copyout</code> | <code>ddi_copyout</code> |

| Obsolete Interface | Preferred Interface |
|------------------------------------|--|
| <code>ddi_dma_addr_setup</code> | <code>ddi_dma_addr_bind_handle</code> |
| <code>ddi_dma_buf_setup(9F)</code> | <code>ddi_dma_buf_bind_handle</code> |
| <code>ddi_dma_curwin</code> | <code>ddi_dma_getwin</code> |
| <code>ddi_dma_free</code> | <code>ddi_dma_free_handle</code> |
| <code>ddi_dma_htoc</code> | <code>ddi_dma_addr[buf]_bind-handle</code> |
| <code>ddi_dma_movwin</code> | <code>ddi_dma_getwin</code> |
| <code>ddi_dma_nextseg</code> | <code>ddi_dma_nextcookie</code> |
| <code>ddi_dma_nextwin</code> | <code>ddi_dma_nextcookie</code> |
| <code>ddi_dma_segtocookie</code> | <code>ddi_dma_nextcookie</code> |
| <code>ddi_dma_setup</code> | <code>ddi_dma_*_handle</code> |
| <code>ddi_dmae_getlim</code> | <code>ddi_dmae_getattr</code> |
| <code>ddi_getlongprop</code> | <code>ddi_prop_lookup</code> |
| <code>ddi_getlongprop_buf</code> | <code>ddi_prop_lookup</code> |
| <code>ddi_getprop</code> | <code>ddi_prop_get_in</code> |
| <code>ddi_getproplen</code> | <code>ddi_prop_lookup</code> |
| <code>ddi_iopb_alloc</code> | <code>ddi_dma_mem_alloc</code> |
| <code>ddi_iopb_free</code> | <code>ddi_dma_mem_free</code> |
| <code>ddi_mem_alloc</code> | <code>ddi_dma_mem_alloc</code> |
| <code>ddi_mem_free</code> | <code>ddi_dma_mem_free</code> |
| <code>ddi_map_regs</code> | <code>ddi_regs_map_setup</code> |
| <code>ddi_prop_create</code> | <code>ddi_prop_update</code> |
| <code>ddi_prop_modify</code> | <code>ddi_prop_update</code> |
| <code>ddi_segmap</code> | see <code>devmap</code> |
| <code>ddi_segmap_setup</code> | <code>devmap_setup</code> |
| <code>ddi_unmap_regs</code> | <code>ddi_regs_map_free</code> |
| <code>free_pktiopb</code> | <code>scsi_free_consistent_buf</code> |
| <code>get_pktiopb</code> | <code>scsi_alloc_consistent_buf</code> |
| <code>makecom_g0</code> | <code>scsi_setup_cdb</code> |

| Obsolete Interface | Preferred Interface |
|--------------------|----------------------|
| makecom_g0_s | scsi_setup_cdb |
| makecom_g1 | scsi_setup_cdb |
| makecom_g5 | scsi_setup_cdb |
| scsi_dmafree | scsi_destroy_pkt |
| scsi_dmaget | scsi_init_pkt |
| scsi_pktdalloc | scsi_init_pkt |
| scsi_pktdfree | scsi_destroy_pkt |
| scsi_resalloc | scsi_init_pkt |
| scsi_resfree | scsi_destroy_pkt |
| scsi_slave | scsi_probe |
| scsi_unslave | scsi_unprobe |
| ddi_peek{c,s,l,d} | ddi_peek{8,16,32,64} |
| ddi_poke{c,s,l,d} | ddi_poke{8,16,32,64} |
| in{b,w,l} | ddi_get{8,16,32} |
| out{b,w,l} | ddi_put{8,16,32} |
| repins{b,w,l} | ddi_rep_get{8,16,32} |
| repouts{b,w,l} | ddi_rep_put{8,16,32} |

Device Management Entries in the power.conf File

The Device Management entries in the power.conf file might not be supported in a future Oracle Solaris release. Similar capability is provided by the Automatic Device Power Management entries in the Oracle Solaris OS.

For more information, see the power.conf(4) man page.

Device Support and Driver Software

The following table lists devices and driver software that might not be supported in a future Oracle Solaris release.

TABLE 4-1 Device and Driver Software

| Name of Physical Device | Name of Driver | Type of Card |
|--|----------------|----------------------|
| AMI MegaRAID host bus adapter, first generation | mega | SCSI RAID |
| Compaq 53C8x5 PCI SCSI and Compaq 53C876 PCI SCSI | cpqncr | SCSI HBA |
| Compaq SMART-2/P Array Controller and Compaq SMART-2SL Array Controller | smartii | SCSI RAID controller |
| IBM PC ServeRAID SCSI, IBM ServeRAID II UltraSCSI, and IBM ServeRAID-3 Ultra2 SCSI | chs | SCSI RAID |

Form and Menu Language Interpreter

The Form and Menu Language Interpreter (FMLI) commands are obsolete and might not be supported in a future Oracle Solaris release. The obsolete commands include the following:

- `/usr/bin/fmli`
- `/usr/bin/vsig`

Host Files in `/etc/net/ti*`

The host files in `/etc/net/ti*` are no longer checked in the Oracle Solaris OS, although these files remain in the software. In a future Oracle Solaris release, these host files might be removed.

Kerberos Ticket Lifetime Parameters in the `krb5.conf` File

The Kerberos Ticket Lifetime parameters, `max_life` and `max_renewable_life`, might no longer be supported in a future Oracle Solaris release. These parameters are in the `appdefaults` section of the `/etc/krb5/krb5.conf` file. Instead of these parameters, use `max_lifetime` and `renew_lifetime` in the `libdefaults` section of the `/etc/krb5/krb5.conf` file.

Korean CID Fonts

Korean CID fonts will not be supported in a future Oracle Solaris release. You can use the Korean TrueType fonts that are included in the Oracle Solaris OS as a replacement for Korean CID fonts.

Legacy or Traditional Non-UTF-8 Locales

Oracle is adopting Unicode for character encoding. Therefore, non-UTF-8 locales might be removed as Java Desktop System login locales in a future Oracle Solaris release.

Functions in the CPU Performance Counters Library (`libcpc`)

Hardware performance counters enable the measurement of many different hardware events that are related to CPU behavior. The following functions in the CPU Performance Counters library (`libcpc`) might not be supported in a future Oracle Solaris release.

| | |
|-----------------------------------|-------------------------------------|
| <code>cpc_access</code> | <code>cpc_pctx_rele</code> |
| <code>cpc_bind_event</code> | <code>cpc_pctx_take_sample</code> |
| <code>cpc_count_sys_events</code> | <code>cpc_rele</code> |
| <code>cpc_count_usr_events</code> | <code>cpc_seterrfn</code> |
| <code>cpc_event_accum</code> | <code>cpc_shared_bind_event</code> |
| <code>cpc_event_diff</code> | <code>cpc_shared_close</code> |
| <code>cpc_eventtostr</code> | <code>cpc_shared_open</code> |
| <code>cpc_getcciname</code> | <code>cpc_shared_rele</code> |
| <code>cpc_getcpuref</code> | <code>cpc_shared_take_sample</code> |
| <code>cpc_getcpuver</code> | <code>cpc_strtoevent</code> |
| <code>cpc_getnpic</code> | <code>cpc_take_sample</code> |
| <code>cpc_getusage</code> | <code>cpc_version</code> |
| <code>cpc_pctx_bind_event</code> | <code>cpc_walk_names</code> |
| <code>cpc_pctx_invalidate</code> | |

New functions have been added to the library in the Oracle Solaris 10 OS. Developers who have code that utilizes the interfaces in the preceding list should instead use the following corresponding new functions:

| | |
|-----------------------------|------------------------------|
| <code>cpc_open</code> | <code>cpc_close</code> |
| <code>cpc_set_create</code> | <code>cpc_set_destroy</code> |

| | |
|---------------------|------------------------|
| cpc_set_add_request | cpc_set_request_preset |
| cpc_buf_create | cpc_buf_destroy |
| cpc_bind_curlwp | cpc_bind_pctx |
| cpc_bind_cpu | cpc_unbind |
| cpc_set_sample | cpc_buf_sub |
| cpc_buf_add | cpc_buf_copy |
| cpc_buf_zero | cpc_buf_get |
| cpc_buf_set | cpc_buf_hrtime |
| cpc_buf_tick | cpc_walk_requests |
| cpc_walk_events_all | cpc_walk_events_pic |
| cpc_walk_attrs | cpc_enable |
| cpc_disable | cpc_caps |
| cpc_npnic | cpc_cpuref |
| cpc_cciname | cpc_seterrhndlr |

See the `cpc(3CPC)` man page for details.

libXinput Library

The `libXinput.so.0` library might not be provided in a future Oracle Solaris release. The `libXinput.so.0` library was provided for backward compatibility with X11R4 applications that were built by using the draft standard X Input API of the Solaris 2.1 and Solaris 2.2 releases. The X11 standard X Input Extension library, `libXi`, was integrated in the Solaris 2.3 release.

All applications that rely on the `libXi` API should be built by using the `libXi` shared library for future compatibility and standards conformance.

NIS+ Name Service Type

NIS+ might not be supported in a future Oracle Solaris release. Tools to aid in the migration from NIS+ to LDAP are available in the Solaris 9 release.

nslookup Test Program

The nslookup program is an interactive DNS test program to construct and send DNS queries. This program might no longer be supported in a future Oracle Solaris release. The same functionality that is provided by this test program is available by using the dig and nslookup commands.

Perl Version 5.6.1

Perl version 5.6.1 might not be supported in a future Oracle Solaris release. Perl version 5.8.4, the default version in the Oracle Solaris 10 OS, is not binary compatible with Perl version 5.6.1. However, the earlier version is still retained in this release. Customized modules that are installed by the customer must be rebuilt and reinstalled to use Perl version 5.8.4. Modify any scripts that require the use of version 5.6.1 to specifically use version 5.6.1 of the interpreter instead of version 5.8.4. The interpreters of the respective Perl versions are located in the following directories:

- Perl 5.6.1: /usr/perl5/5.6.1/bin/perl
- Perl 5.8.4: /bin/perl, /usr/bin/perl, or /usr/perl5/bin/perl

Solaris Management Console Patch Tool (Patch Manager)

The Management Console patch tool, Patch Manager, might not be available in a future Oracle Solaris release.

Solstice Enterprise Agents

Solstice Enterprise Agents might not be supported in a future Oracle Solaris release.

Stand-Alone Router Discovery

The /usr/sbin/in.rdisc implementation of the IPv4 ICMP Router Discovery protocol might not be supported in a future Oracle Solaris release. A near-equivalent version of this protocol, which is implemented as a component of /usr/sbin/in.routed, supports an enhanced administrative interface. The /usr/sbin/in.routed component supports the implementation of Routing Information Protocol (RIP) version 2. The /usr/sbin/in.routed component can also distinguish mobile IP advertisements from router discovery messages.

Oracle Sun Fire Link Interfaces

The Oracle Sun Fire Link Interfaces might no longer be supported in a future Oracle Solaris release.

Java Desktop System Applications

The following applications in Java Desktop System Release 3 might be removed from a future Oracle Solaris release.

- Calendar Preview
- Diagram Editor
- Disk Analyzer
- GNOME Keyboard Layout Switcher
- Java Dictionary
- Java Text Editor
- Mr. Project
- Calendar Preview

Token Ring and Fiber Distributed Data Interface Device Types

Support for token ring (DL_TPR) and Fiber Distributed Data Interface (FDDI) device types in generic LAN driver (GLD) might be removed in a future Oracle Solaris release. After the removal is implemented, drivers for token ring or FDDI devices that rely on this support in GLD cease to function. However, other drivers or applications that do not use this support are not affected. To test whether a driver relies on GLD, run the following script:

```
#!/bin/sh
#
# Test a driver binary for use of GLD
#
for file
do
    /usr/ccs/bin/nm $file | /bin/awk '
        /\|gld_register$/ { isgld=1; }
        END {
            if (isgld)
                print file, "uses GLD";
            else
                print file, "does not use GLD";
        }' file=$file
done
```

For more information about generic LAN driver, see the [gld\(7D\)](#) man page as well as [Writing Device Drivers](#).

WBEM Dynamic Reconfiguration

The WBEM Dynamic Reconfiguration (WDR) feature might not be supported in a future Oracle Solaris release. WDR is currently supported on Oracle's Sun Fire midrange and high-end systems.

XIL Interface

The XIL interface might not be supported in a future Oracle Solaris release. An application that uses XIL causes the following warning message to be displayed:

```
WARNING: XIL OBSOLESCENCE
This application uses the Solaris XIL interface
which has been declared obsolete and may not be
present in version of Solaris beyond Solaris 9.
Please notify your application supplier.
The message can be suppressed by setting the environment variable
"_XIL_SUPPRESS_OBSOLETE_MSG.
```

xetops Utility

The `xetops` utility might not be supported in a future Oracle Solaris release. The `xetops` utility converts an Asian text file to a PostScript file. This conversion enables Asian characters to be printed on PostScript printers that do not have resident Asian fonts.

Similar capability is provided by the `mp` command, which has been enhanced to support all of the native Asian encodings with more options and functionality.

Documentation Issues

This chapter describes known issues that are related to Oracle Solaris documentation.

luupgrade Command Man Page Has an Incorrect Cross-Reference

The `luupgrade(1M)` command man page has an incorrect cross-reference.

In the description about how to use the `-k` option with the `luupgrade` command, the man page incorrectly states that valid keywords for `autoreg_file` can be found in the `sysidcfg(4)` man page. However, the `autoreg_file` file does not use the same keywords as the `sysidcfg` file.

For correct information about the valid keywords for use in the `autoreg_file` file, see “[Auto Registration Impact for Live Upgrade](#)” in *Oracle Solaris 10 1/13 Installation Guide: Live Upgrade and Upgrade Planning*.

Oracle Solaris Patch List

Oracle Solaris patch lists are not documented in the release notes. For information about the patch list for the Oracle Solaris 10 1/13 release, see [Oracle Solaris 10 1/13 Patch List](#).

System Administration Guide: Naming and Directory Services (NIS+)

Starting with the Solaris 10 8/07 release, the Oracle Solaris OS does not have two separate `hosts` files. The `/etc/inet/hosts` file is now a single `hosts` file that contains both IPv4 and IPv6 entries. You need not maintain IPv4 entries in two `hosts` files that always require

synchronization. For backward compatibility, the `/etc/inet/iphnodes` file is replaced with a symbolic link of the same name to the `/etc/inet/hosts` file. For more information, see the `hosts(4)` man page. NIS clients and servers can communicate by using either IPv4 or IPv6 RPC transports.

Discontinuation of Swedish Documentation

Starting with the Solaris 10 8/07 release, documents will not be translated into Swedish. For all the latest information, see the English documents at <http://download.oracle.com/docs/cd/E19253-01/>.

Application Server Documentation Refers to Derby Database Instead of Java DB

Application Server documentation refers to the Java DB database as “Derby.” All references to “Derby” should be read as referring to Java DB. The database is installed in `/usr/appserver/javadb`.

Documents on the Software Supplement CD

Starting with the Oracle Solaris 10 OS, the Supplement CD no longer exists. The documents that were formerly supplied on the Supplement CD can now be found at <http://www.oracle.com/technetwork/documentation/solaris-10-192992.html>. The remaining contents reside elsewhere in the Oracle Solaris kit.

Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 1/13 Release

This appendix lists bugs that were documented in the release notes of previous Oracle Solaris releases that have been fixed in the Oracle Solaris 10 1/13 release.

Previously Documented Bugs Fixed in This Release

| New Bug ID In BugDB | Previously Documented CR Number | Title |
|---------------------|---------------------------------|---|
| 15254232 | 6241086 | ZFS Dynamic LUN Expansion Restriction |
| 15672651 | 6989192 | System Might Hang if the Elastic Policy is Set |
| 15718109 | 7048323 | System Panic Might Occur During DR operations for Crypto |
| 15717410 | 7047435 | Disk Warning Is Displayed When Booting the Oracle Solaris OS |
| 15724805 | 7059880 | System Shuts Down If a Disks or Controllers Are Replaced on a Running Machine |
| 15713048 | 7041435 | System Panic Might Occur When Executing Bulk Crypto Operations on sun4v T3 Machines |
| 15650597 | 6962156 | Issuing XIR on Oracle Solaris 10 9/10 OS Causes a Failure to complete trap processing Error |
| 15737859 | 7083331 | Copy Relocation Does Not Work |
| 15360597 | 6492129 | New ChuYin Input Method Not Supported in Upgrade to IIIMF rev.12 |
| 15721950 | 7054481 | Package Database Contains Path Names That Do Not Exist |
| 15718437 | 7048794 | 64-bit Version of the libsoftcrypto Library Is Slow |
| 15720187 | 7051757 | lucreate Introduces Latency on Slower UFS Systems |

| New Bug ID In BugDB | Previously Documented CR Number | Title |
|---------------------|---------------------------------|--|
| 15601424 | 6898318 | ZFS Root System Might Hang When Swapping to zvol |
| 15662278 | 6976602 | The <code>iscsi/initiator</code> Service Might End in Maintenance State After Upgrade |
| 15732072 | 7072761 | Jumpstart Installation Fails on Machines Attached to a SAN |
| 15726168 | 7061870 | <code>lucreate</code> Command Fails on Systems That Do Not Have the <code>SUNWZoneu</code> Package |
| 15712767 | 7041057 | Zones in Trusted Extensions Do Not Boot After Performing a Live Upgrade. |
| 15724063 | 7058265 | All Types of M-Series Machines Might Encounter Slight Performance Degradation. |